1966

Personality Variation Among Criminals and Psychiatric Patients Relative to Their Immaturity Level.

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67-1191

SPRUILL, Velma Jean, 1940-
PERSONALITY VARIATION AMONG CRIMINALS AND PSYCHIATRIC PATIENTS RELATIVE TO THEIR IMMATURITY LEVEL.

Louisiana State University and Agricultural and Mechanical College, Ph.D., 1966
Psychology, general

University Microfilms, Inc., Ann Arbor, Michigan

PERSONALITY VARIATION AMONG CRIMINALS AND PSYCHIATRIC PATIENTS RELATIVE TO THEIR IMMATURITY LEVEL

A Dissertation

Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Doctor of Philosophy

in

The Department of Psychology

by
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B.S., Louisiana State University, 1962
M.A., Louisiana State University, 1963
August, 1966

ACKNOWLEDGMENTS

The writer expresses her appreciation to Drs. Irwin A. Berg, Joel R. Butler, Felicia Y. Pryor, Roland L. Frye, and Barton R. Farthing, for their guidance and encouragement during the course of this project. Thanks are due to the personnel of the East Baton Rouge Parish Schools, East Louisiana State Hospital, Louisiana State Penitentiary and East Baton Rouge Parish prison for providing subjects for the research.

The writer also wishes to express her appreciation to Mrs. Vera M. Foil for her typing of the completed dissertation.

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ABSTRACT

The present study was undertaken to test three hypotheses: (1) criminals, neuropsychiatric criminals, and neuropsychiatric patients will have a response pattern on the PRT similar to that of children; (2) of the three groups, the responses of the criminal group will bear the closest relationship to children's responses; and (3) the more frequently the criminals and neuropsychiatric criminals have been in difficulty with the law, as measured by the number of arrests, the greater will be their degree of immaturity as measured on the Perceptual Reaction Test (PRT) age scales. Immaturity for the purposes of this study was defined as having a response set tendency characteristic of descending chronological age groups. In other words, responses that were characteristic of children would be considered indicative of immaturity when found in adults. These hypotheses were based on Berg's Deviation Hypothesis.

Separate male and female age scales were developed for four age groups: 5-6 year; 7-8 year; 9-10 year; and 11-12 year, by comparing their response frequencies to the PRT options with those of normal adults by means of a cross-validation technique described by Katzell. Then the deviant groups were scored on these age scales and an Analysis of

Variance, t-tests, and partial correlations were used to test the hypotheses of this study.

The resulting statistical values indicated that, while there was a difference in the manner of responding to the PRT among the various groups, the criminals and neuropsychiatric criminals did not respond like children as had been hypothesized--i.e. did not manifest immaturity as defined in the study. However, the neuropsychiatric patients did respond like children on the 9-10 and 11-12 year scales. Partial correlation coefficients indicated that there was no significant relationship between the age scale scores and the number of offenses committed by the criminals and neuropsychiatric criminals. It was also noted that while the deviant groups did not respond like children neither did they respond consistently like adults. It was proposed that the criminals most likely have a unique response pattern to the PRT just as children have a unique response pattern.

INTRODUCTION

Hippocrates believed that people could be understood in terms of temperament and contended that there were four basic personality types, each of which was governed by a different body humor. In his work On Sacred Disease, he stated that when the humors (blood, black bile, yellow bile, and phlegm) were adversely mixed or otherwise disturbed, physical or mental disease resulted: "depravement of the brain arises from phlegm and bile; those mad from phlegm are quiet, depressed and oblivious; those from bile excited, noisy and mischievous" (Coleman, 1956, p. 24). This ancient theory of personality shows an early attempt at the classification of behavior in terms of temperaments or personality types. In terms of the written record the long history of personality study began with this initially crude effort to relate personality attributes to motivational forces. Since that time, attempts have been made to predict behavior from an individual tendency to respond in a characteristic manner. In present day psychology this tendency to respond in a given manner is usually called set. While the concept of set per se does not appear in Hippocrates' writings, the historical antecedents of the concept can be traced to the era of the Greek philosophers. At present, however, there

is still much confusion regarding this concept. For example, in psychological literature set appears to be synonymous with Einstellung, dispositions, attitudes, biased responses, readiness, response preference, response style, response systems, systematic error, traits, determining tendency, etc. Gibson (1941) in an attempt at clarification said: "The concept of set or attitude is a nearly universal one in psychological thinking, despite the fact that the underlying meaning is indefinite, the terminology chaotic, and the usage by psychologists highly individualistic" (p. 781). Thus, we find the concept of set to be well established in psychological research and theory, although the name it goes by is varied.

There is probably no area in which set has been more frequently investigated than in the area of perception. The first recorded instance of such was at the Greenwich Observatory in 1796. It was noted that people differed in their observations of the time of stellar events, and thus the discovery was made that individual response differences could occur from the same stimuli. Since then, the studies conducted to determine the influence of set in perception may be numbered in the thousands. Experimental studies showing the relationship of set to perception have used a variety of investigative approaches. Levine, Chein and Murphy (1942) investigated the role of

set in perception with ambiguous pictures. They found that the number of food objects perceived in the pictures varied directly as a function of the number of hours of food deprivation. Proshansky and Murphy (1942) and Schafer and Murphy (1943) found that subjects perceived stimuli which were rewarded more frequently than those which were punished. McGinnies (1949) found that misperception of emotionally disturbing, or threatening, socially undesirable or tabooed topics was greater than neutral topics or words. Bruner and Postman (1948) and Postman, Bruner and McGinnies (1948) also found that in tachistoscopic presentation of words the set of the subject determined the speed and frequency of perception of words.

Others have studied the role of set in thinking and problem solving (Pratt, 1936; Luchins, 1942; Adamson, 1952; Maier, 1933); in learning (Woodworth, 1937; Hull, 1952; Tolman, 1934; Dashiell, 1940; Harlow, 1949; Reese, 1964; McGeogh, 1942); and in social attitudes (Allport, 1935).

The whole concept of set in psychology has been comprehensively reviewed by Gibson (1941), and more recently by McGee (1965). These review articles have demonstrated that it would be difficult indeed to think of any area of psychology which does not presuppose that the subject (animal or human) has some predisposing tendency which operates partly to determine or <u>bias</u> the response made to a stimulus.

Thus, McGee (1965) for example, believes that set has become a universal hypothetical construct constituting a major portion of the "O" in the S-O-R paradigm. Further, Stagner (1948) has referred to a personality trait as an elaborate mental set. Allport (1937) in his definition of a trait as a determining tendency or a predisposition to respond in a particular direction is very close to the concept of set. Ach's determining tendency can also be thought of as a set (Boring, 1950) and Adler's "life style" (1927) fits the concept of set. Pinillos (1962) notes that "atencional" set determines what a subject perceives in figure-ground pictures.

As can be seen from the foregoing discussion, it is highly probable that set would also be significant in understanding psychopathological states. The role of set in psychopathological states has been studied by such investigators as McGee, (1965); Frederiksen and Messick, (1959); Jackson and Messick, (1958); Couch and Keniston, (1960); Crowne and Marlowe, (1960); Frederiksen and Messick, (1958); Rosenthal, Lawlor, Zahn, and Shakow, (1960); Bass, (1955); Cohn, (1952); Gage, Leavitt, and Stone, (1957); Leavitt, Hax and Roche, (1955); Lorge, (1937); Voth, (1947); and Wallen, (1945). This evidence that such sets or biases might reflect personality traits followed the concept which underlaid the test developed by Berg, Hunt and Barnes (1949)

which was specifically designed to elicit response sets. This test, the Perceptual Reaction Test (PRT), consisted of 60 abstract designs drawn with ruler and compass. The subject is required to mark one of the following options for each design: like much (LM), like slightly (LS), dislike slightly (DS), or dislike much (DM). Of course, the subject can make no response (NR), although this is contrary to the test instructions. It was felt that these designs were so ambiguous as to be virtually meaningless in any specific sense. Using the response biases which appear when the PRT is administered to different groups of subjects, Berg (1955, 1957) investigated personality differences, but with only limited success when the modal or common expression of bias was used as a measure. However, when attention was shifted to those responses which departed from the typical bias patterns, i.e., the uncommon or atypical responses, results were more promising (Berg, 1957). Thus, if most subjects liked a particular design, Berg studied those deviant few who disliked the design. Berg called these departures "deviant responses." In a review of the measurement of deviant behavior by means of deviant response sets, Berg (1959) indicated the relationship of set to human behavior by defining deviant behavior in terms of its departure from chance when behavior is compared to the normal probability distribution (Berg and Rapaport,

1954; Goodfellow, 1940; Robinson, 1933; Lorge, 1937; Ross and Kohl, 1958; Singer and Young, 1941). Berg (1959) makes the point that response biases are quite stable and doubtless occur in pyschological tests as well as other areas of responding. He further believes that they quite likely affect the validity and reliability of these tests, as well as contributing considerably to the problem of individual behavioral classification. Cronbach (1950) states that response sets interfere with accurate measurement and should be controlled wherever possible. Cronbach suggests that some response sets might be psychologically similar to personality traits and if so they could be capitalized upon. Frederiksen and Messick (1959) have also suggested that response sets may be considered as personality traits. They concluded from the results of their study that the patterns of correlation with personality variables suggested the possibility of using different response sets to measure various personality consistencies. The tendency to respond with a consistent set includes behavior such as gambling, the speed of response, acquiescence, evasiveness, caution-incaution, criticalness, and indecision (Cronbach, 1946; 1950; Frederiksen and Messick, 1958; Bass, 1955; Cohn, 1952; Chapman and Campbell, 1957; Jackson, Messick and Solley, 1957; Shelley, 1955; Guilford, 1954; Rubin-Rabson, 1954). Indeed, deviant response sets appear to be limited only by

the varying stimulus patterns which allow for their emergence. The stimuli to which deviant response patterns have been emitted are widely diverse and include the Rorschach, Thematic Apperception Test, the Minnesota Multiphasic Personality Inventory (MMPI), PRT, the autokinetic phenomenon, the Archimedes spiral after-effect, embedded figures, tilting room, the amount of body sway, food aversions, report writing ability, Group Personality Projective Test, the Ego Strength Q Test, Hippuric Acid Index, Slack's Sentence Completion Test, arm lift after-contraction phenomenon, SN 59 questionnaire, the M-F Masculinity-Femininity Test (Voth, 1947, Freeman and Josey, 1949; Berg and Collier, 1953; Lewis and Taylor, 1955; Witkin, Lewis, Hertzman, Machover, and Meissner, 1954; Cassel and Harriman, 1959; Kingsley, 1961; LaDou, Ellman, Callaway, Edminister, and Christensen, 1962; Cerda, 1963; Winick, 1964). It appears in fact that almost anything to which a response can be made can evoke a deviant response and it is this notion that formed the basis of Berg's (1959) assertion that the specific item form is unimportant. Berg (1965) has reformulated his Deviation Hypothesis as follows: "Deviant behavior patterns are general in the sense that those responses which are regarded as being significant for identifying a particular category of

atypicality in behavior do not exist in isolation. Those responses which are regarded as being significant for a particular category of deviant behavior are associated with a number of other deviant responses which are not regarded as being significant for that particular category of behavior atypicality." Berg does not mean by this that deviant behavior in a crucial area is associated with or causes deviancy in all other areas of behavior or vice versa. For example, a person who is hallucinating is behaving in a deviant manner in what most people would consider a crucial area but this does not mean he will tie his shoes differently or wear his shirt backward. But he may respond deviantly to the PRT (deviant behavior in a non-crucial area).

The value of Berg's hypothesis lies in the fact that it is open to direct experimental testing as contrasted for example with Adler's "life style," and many studies have been conducted by Berg and others to test the Deviation Hypothesis. The instrument primarily used to test the Deviation Hypothesis has been the PRT. A number of rather specific studies have been conducted to create and validate scales for the identification of various pathological groups as well as other groups such as normal young children (Hesterly and Berg, 1958), aged adults (Hawkins,

1960; Boozer, 1961), tuberculosis patients (Engen, 1959), and cardiac patients (Berg, 1962). Barnes (1955) was the first investigator to use deviant responses in developing scales for assessing psychosis. He used the criterion group method described by Edwards (1959) to develop scales to measure psychosis and schizophrenia. Harris (1958) attempted to determine if frequency of deviant responses to the schizophrenic scale was related to the severity of the schizophrenic reaction. Harris hypothesized that the more severe the schizophrenic condition, the greater would be the frequency of deviant responses on the schizophrenic scale. While Harris was not successful in this attempt his failure may be due to the fact that it is relatively difficult to determine severity of the schizophrenic disorder. Hesterly and Berg (1958) compared the responses of young children to adult schizophrenics and found a similarity of responding between these two groups which differed from the manner of responses of normal adults. Barnes (1955) developed a character disorder scale for males. Bradford and Adams (1963) developed a character disorder scale for females and also male and female depressive scales. Various other investigators have developed scales for and conducted research using the PRT (House, 1960; Roitzsch and Berg, 1959; Adams, 1960a, 1960b; Adams and Berg, 1961a,

1961b, 1961c; Cieutat, 1960; Vegas, Frye, and Adams, 1963; Klipple, 1964; Spruill, 1963). The evidence for the Deviation Hypothesis has received a complete review by Adams and Butler (1965).

However, it should be pointed out that most of the investigators developing scales for the PRT have used Chi square analyses to identify the items which significantly differentiated deviant groups. The Chi square test lends itself satisfactorily to analyses of this kind. However, they often used a transformation of the data from frequencies to percentages. This is considered inappropriate statistically, as pointed out in Snedecor (1956) and Steele and Torrie (1960). The effect of using percentages instead of frequencies in a Chi square test is to inflate the Chi square value if the N in the group is small (less than 100) and to under-inflate the value if the N is large (greater than 100). In other words, with a group of 30 subjects a larger number of significant Chi square values will be obtained than will occur with more appropriate statistical treatment. When the number of subjects is close to 100 the effect is less pronounced, but nevertheless real. As Li (1964) has said, transformations in general do a poor job when needed (i.e., when the N is small) but a good job when not needed (i.e., when the N is large). Any research done

with groups of small numbers should, therefore, be interpreted cautiously in light of the statements made above.

The present investigator has recalculated the PRT scales using frequencies instead of percentages and the results are given in tables in the appendix. It should be noted that the scales previously developed using percentages underwent little change by the recalculation if the deviant group N was close to 100.

There have been other approaches which have tested the Deviation Hypothesis. A rigorous test was conducted by Grigg and Thorpe (1960) who did not utilize the criterion group method. Grigg and Thorpe used a modified Gough adjective check list and prepared a list of the most commonly and uncommonly selected adjectives. This list was given to the entering freshmen at the University of Texas. Deviant responses were measured by counting the number of times a commonly selected adjective was not checked and the number of times an uncommonly selected adjective was checked. Then, at the end of the year, they compared the deviant response scores for those students who had reported to the student health center or to the University counseling bureau for psychiatric help, for personal adjustment, or for vocational counseling with the scores for 150 randomly selected non-client controls. They correctly predicted that the control

group and the vocational counseling group would have significantly fewer deviant responses than the psychiatric treatment and personal adjustment counseling groups.

Thus it would seem that the deviant responses can be utilized for the measurement of personality traits. However, a key problem in studying deviant behavior in any form is identification of the deviant groups. Unless the identification of the behavior category under study is well defined no amount of statistical manipulation and theorizing will produce meaningful results. Descriptive labels are often attached to many patterns of behavior which supposedly indicate membership in a deviant group, but these labels like genius, idiot, supervisor, criminal, schizophrenic, etc., are often misleading and very difficult to define behaviorally. Some of the above terms can be operationally defined, for example, an IQ above 140 may be used to indicate genius, while an IQ below 25 is the label for idiocy, even though these terms may not be used properly in everyday speech. As Berg (1965) has pointed out, terms like criminal and supervisor are quite ambiguous and broad in their usage. These labels are far too broad to be meaningful in specific behavioral terms, even though they may define a group of people. For example, the requirements for a supervisor in a factory might be quite

different from those required for a supervisor on a farm or in an office. Thus, while the supervisors in each case might have characteristics in common, both in terms of external criteria and in terms of deviant responses, they would not necessarily have characteristics in common across all categories because the classification supervisor is too broad. The same would be true for the label criminal; there are all types of criminals: forgers, safe-crackers, pickpockets, murderers, etc. By legal definition, criminals of all types are deviant in that their atypical behavior has resulted in incarceration, but there is no general characteristic of their behavior which has a common factor cutting across all types of criminal behavior. The only thing criminals have in common is that they did something proscribed by law. However, just doing something forbidden by law does not represent a valid pattern of deviant responses because, knowingly or unknowingly, everyone has broken some law and therefore is a criminal in a literal sense. It might be better said that no one has arrived at a common factor or personality trait that distinguishes criminals as a behavioral group from adults in general. There have been a number of studies which have attempted to identify criminals or recidivism (Panton, 1962; Kingsley, 1961; Rosen and Mink, 1961; Panton, 1958; Clark, 1948; Freeman and Mason, 1952).

Most of these studies have used the MMPI and the results have been inconsistent. While Panton (1958) did find a distinct prison population profile on the MMPI there were no marked differences between the profiles of six major crime classification groups. Panton (1962) in a later study developed a scale of 77 items on the MMPI which identifies habitual criminals. However, he urges caution in using the scale until further research has been completed. Kingsley (1961) was able to significantly differentiate between psychopathic and non-psychopathic offenders as well as differentiating them from normal adult controls by using Slack's Sentence Completion Test. Pothast (1957) was able to differentiate between two groups of murderers which he called "passion" murderers and "profit" murderers using the Rorschach and MMPI. He found both groups to be emotionally immature. Emotional immaturity was principally determined by the number of Rorschach pure color responses and the sum C score. Guttmacher (1960) in quoting Paul Schilder says that murderers show particular infantile trends in their reaction to life and death. Noel Mailloux and Lavelle (1961) have concluded from their study that delinquent or antisocial types are impulsive and look for immediate satisfaction of their needs with a total disregard of the person or property of another. Few people would argue with the statement that

the offense of the criminal does not occur as a result of ignorance of the law. There is a lack of facing reality, such as wishful thinking, poor logic, behavior which is clearly not to their advantage, impulsive behavior, etc., or in sum, behavior that is characteristic of immaturity. If such is the case, then it could be expected that they would share certain responses with children. If immaturity is measured in terms of chronological age, i.e., the six year old child is more immature than the seven or eight year old, etc., then the hypothesis that criminals are immature in their behavior in non-critical areas (response to test items) as well as critical areas (robbing banks) may be tested, and would constitute a test of the Deviation Hypothesis. Immaturity, for the purposes of this study is therefore defined as responding to the PRT like persons of a younger chronological age.

The person who has been arrested a number of times has profited very little from his experience. If criminals are immature, there should be degrees of immaturity corresponding to the number of offenses. In other words, a person who has been arrested once would possibly respond to the PRT like an eleven-or twelve-year old child, whereas a person who has been arrested twenty times might respond to the PRT similar to a seven-or eight-year old. Just

as a child repeats the same offense many times because he is unable to control the impulse for immediate action or gratification, so does the criminal and his imprisonment has not conditioned him not to repeat his law-breaking. In fact, Ancona (1962) says that incarceration reinforces rather than weakens the incidence of criminal behavior. Wolfgang (1958) in a study of 621 murderers found that 64 percent of them had prior arrest records. Thus the response style of the criminal appears to be one of circular repetition and may, accordingly, be akin to the behavior of a young child. The small child's impulses are held in check by external threats rather than self-control. However, as the child matures (grows older) he learns to control his impulses; his learning becomes permanent. Unlike the child, learning which takes place in the criminal appears impermanent and subject to impulsive need gratification which may be said to be characteristic of immaturity and also characteristic of the recidivistic offender. The impermanent learning referred to here, of course, is the learning that "crime does not pay."

Similarly, some pathological groups (schizophrenics, neurotics) have been shown to respond like children on the PRT (Hesterly and Berg, 1958; Roitzsch and Berg, 1959). Descriptions of schizophrenic behavior and, to a lesser

extent neurotic behavior, typically make reference to immaturity as a common feature of the pathological disorder (Coleman, 1956). The studies quoted above support this notion. Whether or not a general psychiatric population will differ from prisoners in terms of responses on the PRT age scales is not known. Various studies (Guttmacher, 1960; LaDou, et al., 1962; Cassel and Harriman, 1959) attempting to differentiate between prisoners and psychiatric patients, both criminal and non-criminal, have produced conflicting results. It may be that the schizophrenic group studied by Hesterly and Berg (1958) responded like children because of a tendency toward stereotyped, rigid, compulsive responding rather than the impulsive gratification of a need which appears to be characteristic of the criminal population and the young child.

The purpose of the present study is to examine the deviant responses of criminals relative to the responses of children. It is hypothesized generally that criminals exhibit immature behavior in crucial areas (i.e. their criminal activity) and that they will also exhibit immature responses in a non-crucial area (i.e. their responses to the PRT will resemble those of children). An additional purpose of this study is to distinguish criminals from a general neuropsychiatric population and a neuropsychiatric

criminal population on the basis of their responses to the PRT. Specific hypotheses are:

1. All three deviant groups (criminals, neuropsychiatric patients, and neuropsychiatric criminals) will have a response pattern on the PRT similar to those of children.
2. Of the three deviant groups, the responses of the criminal group will have the closest relationship to children's responses.
3. The more frequently the criminals and neuropsychiatric criminals have been in difficulty with the law, as measured by the number of arrests, the greater will be their immaturity as measured on the PRT age scales.

METHOD

Subjects

A total of 2,238 subjects was used in the present study. There were 1,200 public school children, from East Baton Rouge parish, divided into the following groups for the construction of the PRT age scales:

5-0 through 6-11 years (300 males, 300 females)
7-0 through 8-11 years (100 males, 100 females)
9-0 through 10-11 years (100 males, 100 females)
11-0 through 12-11 years (100 males, 100 females).

Eight hundred-fifty normal adults (500 males, 350 females) from Barnes' (1955) sample constituted the normal adult sample.

Fifty neuropsychiatric male patients (NP), 50 neuropsychiatric male criminals (NPC), 50 male criminals (C) and 38 female criminals (Female C) served as subjects for testing the hypotheses of this study. These latter subjects were obtained from East Louisiana State Hospital and the Louisiana State and Parish prison systems. Age data for each group of subjects is given in Table 1.

Procedure

The PRT was administered to the subjects in groups numbering 4 to 40 in size. Standard instructions were used

TABLE 1

Means, Standard Deviations and Ranges for Age of Ss

Groups	N	Mean Age	S.D.	Range
Male Criminals	50	28.7	11.02	17-70
Famale Criminals	38	29.2	9.31	18-55
Male Neuropsychiatric Criminals	50	47.0	16.67	16-86
Male Neuropsychiatric Patients	50	44.6	12.83	19-73

with adults; however, these instructions were modified somewhat for children, as was done in a previous study (Hesterly and Berg, 1958), in order to insure their understanding of the nature of the task required of them. The responses of each subject were transferred to IBM cards for tabulation and scoring. For each option, the frequency of the criterion (normal adult) group was compared with the frequency of the experimental (normal children) groups and tested for statistical significance by the use of a Chi-Square test. Separate age scales for males and females were then constructed by the cross-validation technique proposed by Katzell (1951). In this technique, the samples are randomly divided into two groups (Group A and Group B) and independent statistical analyses are performed for each group. The result is two separate scales (Scale A and Scale B). Scale A is then cross-validated on Scale B and similarly, Scale B is cross-validated on Scale A. Only those options which differentiated the groups at the .05 level of confidence on <u>both</u> the A and B scales were included in the final scale (combined scale). In developing scales by this technique it is recognized that all of the Chi-Square comparisons for each option are not orthogonal. Therefore in computing the Chi-Square analyses the probability level has been distorted so that Scales A and B are not really discriminating at the .05 level. However, by combining the

common items of both scales into one scale (Combined Scale), the probability level is well beyond the .05 level, frequently even beyond the .01 level. In this instance, the lack of independence of the Chi-Square analyses for each item is not handicapping. In the final or combined scale, each option preferred by the normal adults was assigned a weight of minus one; each option preferred by normal children was assigned a weight of plus one. Then, each subject's PRT age scale score was computed by algebraic summation of the weights for the options he chose.

After the age scales were constructed, the PRT responses of the deviant groups were scored on the four age scales to test the hypotheses of this study. A Lindquist Type I Analysis of Variance (Lindquist, 1953) was computed to determine whether the male deviant groups differed in their scores on the age scales. Orthogonal comparisons were made between the average of the NP and NPC versus the C group and between the NP and NPC groups for males only. Because of the lack of female neuropsychiatric criminals, no comparisons could be made for the female deviant group. However, means and standard deviations of the four age scale scores for female prisoners were computed. The mean response of each age group for their age scale was compared to the deviant groups average score for each age scale by t-test

analyses to test the hypothesis that deviant groups responded like children to the PRT.

Finally, partial correlation coefficients were computed between each age scale score and the number of past offenses of the subjects in the NPC and C groups. Partial correlations were used to eliminate the effect of chronological age on the correlation coefficient between age scale score and the number of offenses. This was done in order to account for the spurious differences which resulted from the fact that a young person has not had the same opportunity as an older person to have a long criminal record. This analysis was used to test the hypothesis that the more frequently the criminals and neuropsychiatric criminals have been in difficulty with the law, as measured by the number of arrests, the greater will be their immaturity as measured by means of the PRT age scales. Table 2 shows the mean number of offenses for each group. The types of offenses ranged from simple burglary, assault, armed robbery, narcotics violations and forgery to murder and kidnapping.

TABLE 2

Means, Standard Deviations and Ranges for the Number of Offenses of Ss

Groups	N	Mean No. of Offenses	S.D.	Range
Male Criminals	50	6.9	8.33	1 - 47
Female Criminals	38	7.6	7.61	1 - 24
Male Neuropsychiatric Criminals	50	3.4	4.92	1 - 36

RESULTS AND DISCUSSION

The results of the present investigation indicate that the response patterns of normal young children vary with age in such a way as to reflect maturity level defined in terms of chronological age. This variation in response patterns of normal young children made possible the development of age scales for the PRT based on group tendencies.

Table 3 shows the 5-6 year female age scale developed by the Katzell (1951) technique. Of 300 possible responses, 148 were found to differentiate normal 5-6 year old females from normal adult females at the .05 level of confidence. Fifty-six of these were given a weight of plus one, since they were significantly preferred by children, and 92 were given a weight of minus one, since they were significantly preferred by adults. Forty-eight other options, which differentiated at the .05 level of confidence on only one random-half scale, were eliminated by the cross-validation procedure.

Similarly, as shown in Table 4, the 5-6 year male PRT age scale is composed of 185 items, 66 of which were assigned a weight of plus one and 119 a weight of minus one. Twenty-one other options were eliminated by the

TABLE 3

The 5-6 Year Female PRT Age Scale

Item No.	Options Keyed Plus or Minus				Item No.	Options Keyed Plus or Minus			
	NR	LM	LS	DS DM		NR	LM	LS	DS DM
1.		+	-	-	31.		+		-
2.		+		-	32.		+		-
3.			-	+	33.		+	-	-
4.		+	-	-	34.		+	-	-
5.			-		35.		+	-	-
6.		+	-		36.			-	-
7.		+	-	-	37.		+	-	-
8.		+	-	-	38.		+	-	-
9.			-	+	39.		+	-	- -
10.		+		-	40.		+		
11.		+	-		41.				- -
12.		+		-	42.		+		- -
13.		+			43.		+		-
14.		+			44.		+		-
15.		+		- -	45.			-	- -
16.			-	+	46.		+		-
17.		+	-	-	47.		+	-	- -
18.		+	-	-	48.		+	-	-
19.		+	-	-	49.		+	-	-
20.		+	-	+	50.			-	+
21.		+		- -	51.		+	-	-
22.		+	-	-	52.		+		-
23.			-		53.		+		- -
24.			-	+	54.		+	-	-
25.		+	-		55.		+		- -
26.		+	-	+	56.		+		- -
27.		+	-	-	57.				
28.		+	-	-	58.		+	-	-
29.		+	-	-	59.		+	-	-
30.		+			60.		+		- -

TABLE 4

The 5-6 Year Male PRT Age Scale

Item No.	Options Keyed Plus or Minus				Item No.	Options Keyed Plus or Minus			
	NR LM	LS	DS	DM		NR LM	LS	DS	DM
1.	+	-	-		31.	+	-		
2.	+		-		32.	+	-	-	
3.	+	-	-	+	33.	+	-	-	-
4.	+	-	-		34.	+	-	-	
5.	+	-	-		35.	+	-	-	
6.	+	-	-		36.	+	-	-	
7.	+		-	-	37.	+	-	-	
8.	+	-	-		38.	+	-	-	
9.	+	-	-	+	39.	+	-	-	
10.	+	-	-		40.	+		-	-
11.	+	-	-		41.	+		-	-
12.	+		-	-	42.	+		-	-
13.	+		-		43.	+	-	-	
14.	+	-			44.	+	-	-	-
15.	+		-	-	45.	+	-	-	-
16.	+	-	-	+	46.	+		-	-
17.	+	-	-		47.	+	-	-	
18.	+	-	-		48.	+	-	-	
19.	+	-	-		49.	+	-	-	
20.	+	-	-		50.	+	-	-	
21.	+	-	-	-	51.	+	-	-	
22.	+	-	-		52.	+		-	
23.	+	-			53.	+	-	-	-
24.	+	-	-		54.	+	-	-	
25.	+	-	-		55.	+		-	-
26.	+	-	-	+	56.	+		-	-
27.	+	-	-		57.	+	-	-	
28.	+	-		+	58.	+	-	-	+
29.	+	-	-		59.	+	-	-	
30.	+	-	-		60.	+	-	-	

cross-validation procedure.

The 7-8 year female PRT age scale (Table 5) contains 91 items, 43 of which were assigned a weight of plus one and 48 a weight of minus one. Sixty items of the possible 300 were eliminated by the cross-validation procedure.

Table 6 shows the 7-8 year male PRT age scale which is based upon 123 items. Of these, 48 were given a weight of plus one since they were significantly preferred by children and 75 were assigned a weight of minus one because they were significantly preferred by adult males. Fifty-two options which differentiated on only one random-half scale were eliminated by the cross-validation procedure.

Tables 7 and 8 show the PRT age scales for the 9-10 year females and males, respectively. The 9-10 year female age scale consists of 71 items; 37 plus and 24 minus, while the 9-10 year male age scale has 84 items; 38 plus, 46 minus. Seventy-three items were eliminated in the 9-10 year female scale and 59 in the 9-10 year male scale in the cross-validation process.

Shown in Tables 9 and 10 are the 11-12 year female and male age scales. Table 9, the female age scale, has 46 items. Of these, 27 are scored plus and 19 scored minus. Fifty-five items were eliminated in the cross-validation of this scale. Table 10, the male age scale, has 18 options

TABLE 5

The 7-8 Year Female PRT Age Scale

Item No.	Options Keyed Plus or Minus				
	NR	LM	LS	DS	DM
1.		+	-	-	
2.		+		-	
3.					
4.		+		-	-
5.					
6.		+	-		
7.		+			
8.		+	-		
9.					
10.		+			
11.		+	-		
12.		+			-
13.				-	
14.					
15.		+		-	-
16.			-		
17.		+		-	
18.		+		-	
19.		+			
20.		+	-		
21.		+		-	-
22.		+			
23.					
24.					
25.		+	-		
26.		+			
27.		+		-	
28.		+	-		
29.					
30.				-	

Item No.	Options Keyed Plus or Minus				
	NR	LM	LS	DS	DM
31.		+		-	
32.		+		-	-
33.		+	-		
34.		+			
35.		+		-	
36.		+	-	-	
37.					
38.		+	-		
39.		+			-
40.		+		-	-
41.		+		-	
42.		+			-
43.		+		-	
44.		+		-	
45.		+		-	
46.		+		-	
47.					
48.		+	-		
49.		+	-	-	
50.					
51.		+	-		
52.		+			
53.		+			
54.					
55.					-
56.					-
57.					
58.		+	-		
59.		+	-	-	
60.		+			

TABLE 6

The 7-8 Year Male PRT Age Scale

Item No.	Options NR	Keyed LM	Plus or Minus LS	DS	DM
1.		+	-		
2.		+		-	
3.		+	-	-	
4.		+	-	-	
5.		+		-	
6.		+		-	
7.		+		-	-
8.		+	-		
9.		+	-		
10.		+		-	
11.		+	-		
12.		+			-
13.				-	
14.		+		-	
15.				-	-
16.		+	-		
17.		+	-	-	
18.		+		-	
19.		+		-	
20.		+	-		
21.		+		-	
22.		+	-		
23.		+			
24.		+	-		
25.		+	-	-	
26.			-		
27.		+		-	
28.			-		
29.		+	-		
30.		+		-	-

Item No.	Options NR	Keyed LM	Plus or Minus LS	DS	DM
31.		+		-	
32.		+			
33.		+		-	
34.		+			
35.		+	-		
36.		+		-	
37.		+		-	
38.		+	-		
39.		+	-	-	
40.				-	
41.		+			-
42.					-
43.				-	
44.		+		-	-
45.		+		-	-
46.				-	
47.			-	-	
48.		+	-	-	
49.		+	-	-	
50.		+	-		
51.		+	-	-	
52.				-	
53.		+		-	-
54.		+	-		
55.				-	
56.			-	-	-
57.		+	-		
58.		+	-		
59.		+		-	
60.		+		-	-

TABLE 7

The 9-10 Year Female PRT Age Scale

Item No.	Options Keyed Plus or Minus NR	LM	LS	DS	DM
1.					
2.				-	
3.					
4.		+			-
5.		-			+
6.					
7.		+			
8.		+			
9.					
10.					
11.		+			
12.			+		-
13.			+	-	
14.		+			
15.		+	+		-
16.					
17.		+			-
18.		+			
19.		+			
20.					
21.					
22.		+		-	
23.		+			
24.					
25.		+			
26.		+	-		
27.		+		-	-
28.		+	-	-	
29.					
30.				-	

Item No.	Options Keyed Plus or Minus NR	LM	LS	DS	DM
31.					
32.					
33.		+			
34.		+			
35.		+			
36.		+			
37.					
38.					
39.		+		-	
40.					-
41.		+	+		-
42.		+			-
43.		+			
44.		+			
45.		+		-	
46.		+			
47.					-
48.		+	-		
49.		+			
50.					
51.		+			
52.					
53.		+			-
54.					
55.					
56.					-
57.					
58.		+			
59.					
60.		+			-

TABLE 8

The 9-10 Year Male PRT Age Scale

Item No.	Options Keyed Plus or Minus NR	LM	LS	DS	DM
1.		+			
2.		+		-	
3.		+	-		
4.		+		-	
5.					
6.		+			
7.		+		-	-
8.		+			
9.					
10.					
11.		+	-		
12.					-
13.				-	
14.		+			
15.		+		-	-
16.					
17.				-	
18.				-	
19.		+			
20.		+			
21.		+		-	
22.		+	-		
23.		+	-		
24.					
25.		+		-	
26.		+	-		
27.		+		-	-
28.			-		
29.		+			
30.		+		-	

Item No.	Options Keyed Plus or Minus NR	LM	LS	DS	DM
31.		+		-	
32.		+			
33.		+			
34.		+		-	
35.		+		-	
36.		+		-	
37.		+			
38.		+			
39.		+	-		
40.				-	-
41.				-	-
42.				-	-
43.				-	
44.		+		-	-
45.				-	
46.				-	
47.				-	
48.		+		-	
49.		+		-	
50.		+	-		
51.		+		-	
52.					
53.					-
54.					
55.				-	
56.				-	
57.		+	-		
58.		+			
59.		+			
60.		+			

TABLE 9

The 11-12 Year Female PRT Age Scale

Item No.	Options Keyed Plus or Minus NR	LM	LS	DS	DM
1.					
2.					
3.					
4.		+			-
5.		-			
6.					
7.		+		-	
8.					
9.					
10.					
11.		+			
12.		+			-
13.				-	
14.		+			
15.					-
16.					
17.					-
18.		+			
19.		+			
20.					
21.				-	
22.					
23.		+	-		
24.					
25.		+			
26.		+			
27.		+		-	-
28.		+	-		
29.					
30.					-

Item No.	Options Keyed Plus or Minus NR	LM	LS	DS	DM
31.					
32.					
33.		+		-	
34.		+			
35.					
36.		+			
37.					
38.					
39.		+			
40.					
41.		+			-
42.		+		-	
43.		+			
44.		+		-	
45.		+			
46.		+			
47.		+			
48.					-
49.		+			
50.					
51.		+			
52.					
53.					
54.		+			
55.					
56.					
57.					
58.					
59.		+			
60.		+			-

TABLE 10

The 11-12 Year Male PRT Age Scale

Item No.	Options Keyed Plus or Minus NR	LM	LS	DS	DM
1.					
2.					
3.		+	-		
4.		+			
5.					
6.		+			
7.		+		-	
8.					
9.					
10.					
11.					
12.					-
13.				-	
14.			-		
15.				-	-
16.					+
17.				-	
18.				-	
19.					
20.		+			
21.				-	
22.					
23.		+	-		
24.					
25.		+			
26.		+			
27.		+		-	
28.					
29.					
30.				-	

Item No.	Options Keyed Plus or Minus NR	LM	LS	DS	DM
31.					
32.					
33.		+		-	
34.		+			
35.					
36.					
37.					
38.					
39.		+		-	
40.					
41.				-	
42.				-	-
43.					
44.				-	
45.					
46.					
47.				-	
48.		+	-		
49.					
50.			-		
51.		+		-	
52.				-	
53.				-	-
54.					
55.					
56.					
57.		+	-		
58.					
59.		+			
60.		+			

scored plus and 27 scored minus, making a total of 45 options for this scale. Fifty-six items were eliminated in the cross-validation process.

It should be noted that, with increased age, there was a progressive decrease in the number of items which significantly differentiated children from adults in each scale. This suggests that the scales may be correlated with a number of critical behavioral changes which occur during the process of growing to adulthood, e.g., those response modifications which are related to physical and intellectual maturation. Therefore it seems reasonable that these scales could be used with adults to indicate immaturity in the sense that responses which were characteristic of children would be considered indicative of immaturity when found in adults.

A summary of the means, standard deviations and standard errors of the means for the various age groups on each age scale is presented in Table 11. It should be noted that although the variability within the various age groups is rather large, the standard errors of the mean are small. Inspection of Table 11 will show that some of the age groups appear to have a higher score on other age scales than on the age scale of their group. However, it should be remembered that the scales not only have varying numbers of items, but

TABLE 11

Summary of Means, Standard Deviations and Standard Errors of PRT Age Scale Scores by Groups

Age Scales

Age Groups	5-6 Year			7-8 Year		
	Mean	S.D.	S.E.	Mean	S.D.	S.E.
5-6 Yr. Female	18.76	18.44	2.61	19.56	13.18	1.86
5-6 Yr. Male	20.28	27.22	3.85	18.20	20.29	2.87
7-8 Yr. Female	8.19	18.92	1.89	14.46	14.13	1.41
7-8 Yr. Male	14.33	27.81	2.78	15.96	19.65	1.96
9-10 Yr. Female	-1.55	18.43	1.84	6.89	13.69	1.37
9-10 Yr. Male	0.33	22.28	2.23	4.30	16.67	1.67
11-12 Yr. Female	-4.46	15.96	1.60	4.37	12.22	1.22
11-12 Yr. Male	-9.06	18.23	1.82	-2.48	13.57	1.36

Age Groups	9-10 Year			11-12 Year		
	Mean	S.D.	S.E.	Mean	S.D.	S.E.
5-6 Yr. Female	16.64	8.59	1.21	13.60	7.21	1.02
5-6 Yr. Male	17.50	14.06	1.99	7.36	6.74	0.95
7-8 Yr. Female	14.79	9.43	0.94	11.75	7.98	0.80
7-8 Yr. Male	15.50	14.42	1.44	6.54	7.05	0.71
9-10 Yr. Female	13.43	7.94	0.79	10.27	6.95	0.69
9-10 Yr. Male	10.13	11.88	1.19	3.83	6.44	0.64
11-12 Yr. Female	10.90	7.54	0.75	9.62	6.19	0.62
11-12 Yr. Male	4.37	10.46	1.05	2.65	5.56	0.56

different numbers of plus and minus items which would account for these variations. That is, the number of items for lower ages is greater, while there are fewer items which compose the scales for the older age groups. Table 12 shows the number of plus and minus items for each scale, as well as the possible range of scores for each age scale. At first glance, it would seem that the possible range of scores on the 5-6 year female scale, for example, should be -92 to +56. However, the PRT consists of 60 designs and only one option may be marked for each design. This narrows the possible range of scores to ± 60. In addition, with reference to Table 3, it can be seen that some items have more than one option marked plus and some are not marked plus at all. Counting the items scored plus in Table 3, one finds 54. Similarly, counting the items marked minus in any option, one finds 55. It should be emphasized that items, <u>not</u> <u>options</u> are counted. Therefore, the possible range of scores for the 5-6 year female age scale is from -55 to +54. Thus one can see how it would be possible for the 5-6 year females to have an average score of 18.76 on the 5-6 year female age scale and an average score of 19.56 on the 7-8 year female scale. This is due to the fact that there is a greater range of possible scores on the 5-6 year female age scale than there is on the 7-8 year female age scale. Because the 5-6 year females could obtain a

TABLE 12

Number of Plus and Minus Items and Possible Range of Scores
For the Four PRT Age Scales

	5-6 Year Male	5-6 Year Female	7-8 Year Male	7-8 Year Female	9-10 Year Male	9-10 Year Female	11-12 Year Male	11-12 Year Female
Plus Items	66	56	48	43	38	37	18	27
Minus Items	119	92	75	48	46	24	27	19
Total Number of Items	185	148	123	91	84	71	45	46
Possible Range of Scores	-60to+60	-55to+54	-57to+48	-39to+43	-39to+38	-22to+35	-24to+18	-18to+27

lower minus score on the 5-6 year female age scale than they could obtain on the 7-8 year female age, (-55 as opposed to -39), the mean score for the 5-6 year females on the 5-6 year age scale could be, and was, lower than their mean score on the 7-8 year female age scale. Similar interpretations would apply to the other apparent disparities in Table 11.

The results of the analysis of variance of the age scale scores for the three male deviant groups (NPC, NP and C) are shown in Table 13. The three groups differed significantly in their responses to the PRT as measured by their average response to all four scales. Orthogonal comparisons showed that when the average scores of the NPC and NP groups were compared with the average C group scores, the plus values were significantly more represented in the NPC and NP groups, while the minus values were significantly more represented in the C group. There was no difference between the NPC and NP groups when the four scale scores were averaged together. These results indicate that it is feasible to assume that the NPC group and the NP group are more alike than the C and NPC groups. In other words, the neuropsychiatric criminals have more in common with the neuropsychiatric patients than with the criminals, in terms of their responses to the PRT. It would also appear that the similar response tendencies of the NP and NPC groups had its base in the related pathology

TABLE 13

Analysis of Variance Summary Table of the Age Scale Scores for the NPC, NP and C Groups (Males Only)

Source of Variation	df	SS	MS	F
Between-Subjects	149	184992.00		
Groups	2	13283.00	6641.50	5.69**
Error	147	171709.00	1168.09	
Within-Subjects	450	54654.00		
Scales	3	12457.00	4152.33	46.89**
Groups X Scales	6	3146.00	524.33	5.52**
Error	441	39051.00	88.55	
Total	599	239646.00		

**Significant at .01 level.

of the groups with the criminal behavior in this instance simply representing symptomatology of the underlying psychosis. It is equally evident that all criminal behavior is not symptomatic of presently classifiable psychosis because of the lack of relationship shown in the response tendencies of the criminals when compared to the other groups (NP and NPC).

There was a significant difference among the four age scales when the scores were averaged across groups. However, this was expected since if there had not been a significant difference, this would have implied that the four scales were the same. Orthogonal comparisons between the averages of scales 5-6 and 7-8 versus the averages of scales 9-10 and 11-12 showed that scales 5-6 and 7-8 had significantly higher minus scores than did scales 9-10 and 11-12 when averaged across all groups. Similarly, orthogonal comparisons showed that there was a significant difference between the average score for all three groups on scales 5-6 versus 7-8. The 5-6 year scale had significantly more minus scores than did the 7-8 year scale. Also orthogonal comparisons between scales 9-10 versus 11-12, showed that the 9-10 year scale had significantly fewer minus responses than did the 11-12 year scale when the scores were averaged for all three groups.

The interaction between groups and scales was significant at the .01 level. Orthogonal comparisons were made to determine where the differences were. A comparison of the three groups scores on the 5-6 year scale as opposed to their scores on the 7-8 year scales showed that the differences in average scores to the two scales was approximately the same for all three groups. In other words, there was not a significant interaction between the groups and the 5-6, 7-8 year scales. There was a significant interaction when the three groups' scores were compared on scales 9-10 and 11-12. Both the NPC and NP groups had a higher plus score on the 9-10 year scale than on the 11-12 year scale. The C group had almost the same mean score for both the 9-10 and 11-12 year scales.

Figure 1 shows a graph of the mean scores of the deviant groups on each age scale. As can be seen, all four groups revealed approximately the same trend in their scores on the four age scales.

The hypothesis that all three deviant groups (criminals, neuropsychiatric criminals and neuropsychiatric patients) would have a response pattern on the PRT similar to that of children was, accordingly, only partially supported. Only the NP males responded like children on the 9-10 and 11-12 year male age scales.

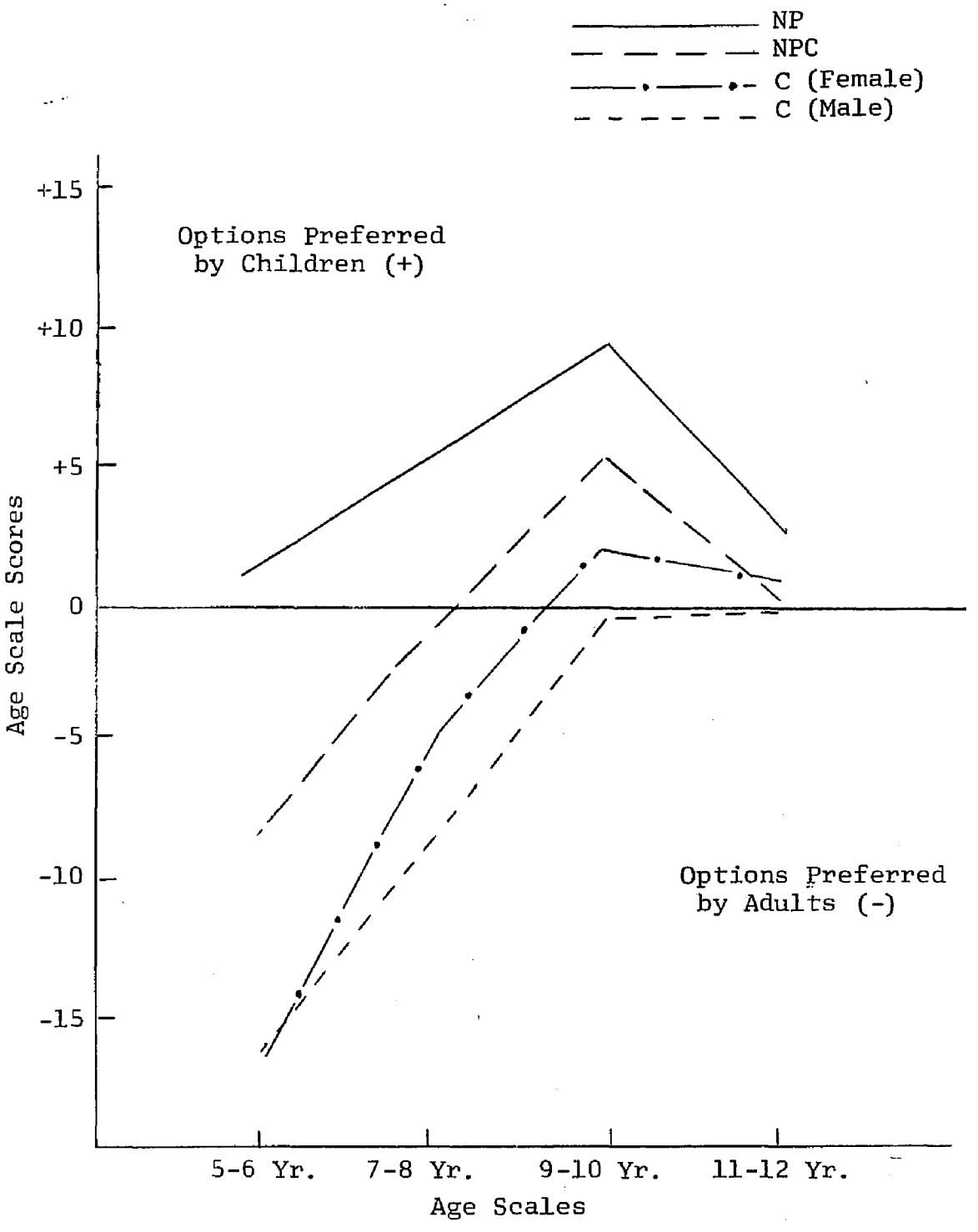

Figure 1: Mean Responses of Deviant Groups to the PRT Age Scales

Shown in Table 14 are the differences between the mean scores of the deviant groups and the age groups on each age scale. Only two of these differences were not statistically significant. The male NP group did not differ significantly from the mean score of children on the 9-10 and 11-12 year age scales of the PRT. Among the deviant groups, the hypothesis that the responses of the criminals would have the closest relationship to children's responses was not supported. Table 15 gives the mean score on the four age scales for the deviant groups. As can be seen from this table the scores of all deviant groups consistently increased from the 5-6 year scale to the 9-10 year scale and then slightly decreased on the 11-12 year scale. This was also demonstrated in Figure 1.

From these results it appears that criminals (C) and neuropsychiatric criminals (NPC) do not respond like children to the PRT, and thus cannot be considered immature, where immaturity is based on a response set tendency characteristic of descending chronological age groups. While both criminal groups failed to respond like children, neither did they consistently respond like adults. It is possible that criminals, as a group, have a unique set of responses to the PRT.

The third hypothesis, that the more frequently the criminals and neuropsychiatric criminals have been in

TABLE 14

Differences Between Mean Score on PRT Age Scales
For the Deviant and Age Groups

Deviant Groups	Age Groups 5-6	7-8	9-10	11-12
NPC	28.88*	16.76*	4.53*	1.75*
NP	18.58*	10.06*	.63	-.35
C (Male)	36.48*	24.76*	10.93*	2.95*
C (Female)	35.16*	19.36*	11.03*	8.52*

*Significant at .05 level.

TABLE 15

Mean Score on Age Scales for Deviant Groups

AGE SCALES

Groups	5-6 Yr.	7-8 Yr.	9-10 Yr.	11-12 Yr.
Male NPC	-8.6	-0.8	5.6	0.9
Male NP	1.7	5.9	9.5	3.0
Male C	-16.2	-8.8	-0.8	-0.3
Female C	-16.4	-4.9	2.4	1.1

difficulty with the law, as measured by the number of arrests, the greater will be their immaturity as measured by the PRT age scales, was not supported. Table 16 shows the partial correlation coefficients computed between the age scale scores and the numbers of offenses of the C and NPC groups with age held constant. None of these correlations was significant at the .05 level. Thus, it appears that the number of offenses bears no relationship to the scores on the PRT age scales, at least insofar as the present study is concerned. It would seem that the chronological age base of the definition of immaturity does not provide sufficient scope to include such criminal behavior as the impulsive repeating of anti-social and illogical actions. This may partially account for the lack of relationship between repeated offenses and the scores on the PRT age scales.

TABLE 16

Partial Correlation Coefficients Between Age Scale Score and Number of Offenses with Age Held Constant

AGE SCALES

Groups	5-6 Yr.	7-8 Yr.	9-10 Yr.	11-12 Yr.
Male NPC	-.15	-.14	-.10	-.06
Male C	.08	.08	.13	.14
Female C	-.24	-.26	-.05	-.19

SUMMARY

The present study was undertaken to test three hypotheses: (1) criminals, neuropsychiatric criminals, and neuropsychiatric patients will have a response pattern on the PRT similar to that of children; (2) of the three groups, the responses of the criminal group will bear the closest relationship to children's responses; and (3) the more frequently the criminals and neuropsychiatric criminals have been in difficulty with the law, as measured by the number of arrests, the greater will be their degree of immaturity as measured on the Perceptual Reaction Test (PRT) age scales. Immaturity for the purposes of this study was defined as having a response set tendency characteristic of descending chronological age groups. In other words, responses that were characteristic of children would be considered indicative of immaturity when found in adults. These hypotheses were based on Berg's Deviation Hypothesis.

Separate male and female age scales were developed for four age groups: 5-6 year; 7-8 year; 9-10 year; and 11-12 year, by comparing their response frequencies to the PRT options with those of normal adults by means of a cross-validation technique described by Katzell. Then the deviant groups were scored on these age scales and an Analysis of

Variance, t-tests, and partial correlations were used to test the hypotheses of this study.

The resulting statistical values indicated that, while there was a difference in the manner of responding to the PRT among the various groups, the criminals and neuropsychiatric criminals did not respond like children as had been hypothesized--i.e. did not manifest immaturity as defined in the study. However, the neuropsychiatric patients did respond like children on the 9-10 and 11-12 year scales. Partial correlation coefficients indicated that there was no significant relationship between the age scale scores and the number of offenses committed by the criminals and neuropsychiatric criminals. It was also noted that while the deviant groups did not respond like children neither did they respond consistently like adults. It was proposed that the criminals most likely have a unique response pattern to the PRT just as children have a unique response pattern.

BIBLIOGRAPHY

Adams, H. E. Statistical rigidity in schizophrenic and normal groups measured with auditory and visual stimuli. Psychol. Rep., 1960a, 7, 119-122.

Adams, H. E. Deviant responses in the measurement of personality characteristics. Unpublished Ph.D. Dissertation, Louisiana State University, 1960b.

Adams, H. E., and Berg, I. A. Affective tone of test option choice as a deviant response. Psychol. Rep., 1961a, 8, 79-85.

Adams, H. E., and Berg, I. A. Schizophrenia and the frequency of qualitative deviant responses. Psychol. Rep., 1961b, 8, 123-126.

Adams, H. E., and Berg, I. A. Schizophrenia and deviant response sets produced by auditory and visual test content. J. Psychol., 1961c, 51, 393-398.

Adams, H. E., and Butler, Joel R. The Deviation Hypothesis: A review of the evidence. Paper read at Symposium on Response Set and Personality Assessment, Baton Rouge, Louisiana, 1965.

Adamson, R. E. Functional fixedness as related to problem-solving. J. exp. Psychol., 1952, 44, 288-291.

Adler, A. The practice and theory of individual psychology. New York: Harcourt, 1927.

Allport, G. W. Attitudes. In C. Murchison (Ed.) A handbook of social psychology. Worcester: Clark University Press, 1935, pp. 798-844.

Allport, G. W. Personality: A psychological interpretation. New York: Holt, 1937.

Ancona, Leonardo. Considerazioni sulla dinamica psicologica del reato e della reculsione. Contributi dell'Instituto di Psicologia, 1962, No. 24, 26-39.

Barnes, E. H. The relationship of biased test responses to psychopathology. J. abnorm. soc. Psychol., 1955, 51, 286-290.

Bass, B. M. Authoritarianism or acquiescence? J. abnorm. soc. Psychol., 1955, 51, 616-623.

Berg, I. A. Response bias and personality: the Deviation Hypothesis. J. Psychol., 1955, 40, 61-71.

Berg, I. A. Deviant responses and deviant people; the formulation of the Deviation Hypotheses. J. consult. Psychol., 1957, 4, 154-161.

Berg, I. A. The unimportance of test item content. In B. M. Bass and I. A. Berg (Eds.), Objective approaches to personality assessment. New York: Van Nostrand, 1959, pp. 83-99.

Berg, I. A. Deviant response patterns among cardiac patients. Psychol. Rep., 1962, 11, 628.

Berg, I. A. The Deviation Hypothesis: A broad statement. Paper presented at a symposium on Response Set and Personality Assessment, Baton Rouge, Louisiana, 1965.

Berg, I. A., and Collier, J. S. Personality and group differences in extreme response sets. Educ. psychol. Measmt., 1953, 13, 164-169.

Berg, I. A., and Hunt, W. A., and Barnes, E. H. The perceptual reaction test. Evanston, Ill.: 1949.

Berg, I. A., and Rapaport, G. M. Resppnse bias in an unstructured questionnaire. J. Psychol., 1954, 38, 475-481.

Boozer, D. G. Response sets as indicators of senescence and of psychopathology in old age. Unpublished Ph.D. Dissertation, Louisiana State University, 1961.

Boring, E. G. A history of experimental psychology. (2nd. ed.), New York: Appleton-Century-Crofts, 1950.

Bradford, June T., and Adams, H. E. Deviant responses as indicators of depression and character disorder. Psychol. Rep., 1964, 14, 235-238.

Bruner, J. S., and Postman, L. Symbolic value as an organizing factor in perception. J. soc. Psychol., 1948, 27, 203-208.

Cassel, Russel N., and Harriman, B. Lynn. A comparative analysis of personality and ego strength test scores for in-prison, neuro-psychiatric and typical individuals. J. Educ. Res., 1959, 53, 43-52.

Cerda, Enrique. Un cuestionario de neurotismo: SN 59. Revista de Psicologia de general y aplicada. 1963, 18, 901-904.

Chapman, L. J., and Campbell, D. T. Response set in the F scale. J. abnorm. soc. Psychol., 1957, 54, 129-132.

Cieutat, L. G. Deviant responses as a function of mental deficiency. Unpublished Ph.D. Dissertation, Louisiana State University, 1960.

Clark, J. H. Application of the MMPI in differentiating AWOL recidivists from non-recidivists. J. Psychol., 1948, 26, 229-234.

Cohn, T. S. Is the F scale indirect? J. abnorm. soc. Psychol., 1952, 47, 185-192.

Coleman, James C. Abnormal Psychology and Modern Life (2nd. ed.), New York: Scott, Foresman and Company, 1956.

Couch, A., and Keniston, K. Yeasayers and naysayers: Agreeing response set as a personality variable. J. abnorn. soc. Psychol., 1960, 60, 151-174.

Cronbach, L. J. Response set and test validity. Educ. psychol. Measmt., 1946, 6, 475-494.

Cronbach, L. J. Further evidence on response sets and test designs. Educ. psychol. Measmt., 1950, 10, 3-31.

Crowne, D. P., and Marlowe D. A new scale of social desirability independent of psychopathology. J. consult. Psychol., 1960, 24, 349-354.

Dashiell, J. F. A neglected fourth dimension to psychological research. Psychological Review, 1940, 47, 289-305.

Edwards, A. L. Social desirability and personality test construction. In B. M. Bass, and I. A. Berg (Eds.) Objective approaches to personality assessment. New York: Van Nostrand, 1959, pp. 100-118.

Engen, E. P. Response set of pulmonary tuberculosis patients. Unpublished Ph.D. Dissertation, Louisiana State University, 1959.

Frederiksen, N., and Messick, S. Response set as a measure of personality. Office of Naval Research Contract ONR-694(00), Project Designation NR 151-113, Educational Testing Service, Princeton, New Jersey: 1958.

Frederiksen, N., and Messick, S. Response set as a measure of personality. Educ. psychol. Measmt., 1959, 19, 137-157.

Freeman, E., and Josey, W. E. Quantitative visual index to memory impairment. Arch. neurol. Psychiat., 1949, 62, 794-796.

Freeman, R. A., and Mason, H. M. Construction of a key to determine recidivists from non-recidivists using the MMPI. J. clin. Psychol., 1952, 8, 207-208.

Gage, N. L., Leavitt, G. S., and Stone, G. C. The psychological meaning of acquiescence set for authoritarianism. J. abnorm. soc. Psychol., 1957, 55, 98-103.

Gibson, J. J. A critical review of the concept of set in contemporary experimental psychology. Psychological Bulletin, 1941, 38, 781-817.

Goodfellow, L. D. The human element in probability. J. gen. Psychol., 1940, 33, 201-205.

Grigg, A. E., and Thorpe, J. S. Deviant responses in college adjustment clients: a test of Berg's Deviation Hypothesis. J. consult. Psychol., 1960, 24, 92-94.

Guilford, J. P. The validation of an "indecision" score for predicting proficiency of foremen. J. appl. Psychol., 1954, 38, 224-226.

Guttmacher, The mind of the murderer. New York: Grove Press, Inc., 1960.

Harlow, H. F. The formation of learning sets. Psychol. Rev., 1949, 56, 51-56.

Harris, J. L. Deviant response frequency in relation to severity of schizophrenic reaction. Unpublished M. A. Thesis, Louisiana State University, 1958.

Hawkins, W. A. Deviant responses, response variability, and paired associate learning. Unpublished Ph.D. Dissertation, Louisiana State University, 1960.

Hesterly, S. O., and Berg, I. A. Deviant responses as indicators of immaturity and schizophrenia. J. consult. Psychol., 1958, 22, 389-393.

Hesterly, S. O. Deviant Response Patterns as a Function of Chronological Age. Unpublished Ph.D. Dissertation, Louisiana State University, 1960.

House, C. W. Response bias as a measure of emotional disturbance in children. Unpublished Ph.D. Dissertation, Louisiana State University, 1960.

Hull, C. L. A behavior system. New Haven: Yale University Press, 1952.

Jackson, D. N., and Messick, S. Content and style in personality assessment. Psychol. Bull., 1958, 55, 243-252.

Jackson, D. N., Messick, S. J., and Solley, C. M. How rigid is the "authoritarian"? J. abnorm. soc. Psychol., 1957, 54, 137-140.

Katzell, R. A. Cross-validation of item analysis. Educ. psychol. Measmt., 1951, 11, 16-22.

Kingsley, Leonard. A comparison of the sentence completion responses of psychopaths and prisoners. J. clin. Psychol., 1961, 17(2), 183-185.

Klipple, Suzanne J. The effect of stimulus meaning in the elicitation of response bias. Unpublished M. A. Thesis, Louisiana State University, 1964.

LaDou, J., Ellman, G. L., Callaway, E., III, Edminister, I. F. and Christensen, R. L. Correlates of manifest anxiety. J. Psychosom. Res., 1962, 6(1), 41-47.

Leavitt, H. J., Hax, H., and Roche, J. H. "Authoritarianism" and agreement with things authoritative. J. Psychol., 1955, 40, 215-221.

Levine, R., Chein, I., & Murphy, G. The relationship of the intensity of a need to the amount of perceptual distortion. J. Psychol., 1942, 13, 283-293.

Lewis, N. A., and Taylor, J. A. Anxiety and extreme response preferences. Educ. psychol. Measmt., 1955, 15, 111-116.

Li, Jerome C. R. Statistical Inference. Ann Arbor: Edwards Brothers, Inc., 1964.

Lindquist, E. F. Design and Analysis of experiment in psychology and education. Boston: Houghton-Miff-flin, 1953.

Lorge, I. Gen-like: halo or reality? Psychol. Bull., 1937, 34, 545-546.

Luchins, A. S. Mechanization in problem-solving. Psychological Monographs. 1942, 54, No. 6.

Maier, N. R. F. An aspect of human reasoning. British J. Psychol., 1933, 24, 144-155.

McGee, R. K. Response set or style in relation to personality: an orientation. A paper presented at a symposium on Response Set and Personality Assessment, Baton Rouge, Louisiana, 1965.

McGeogh, J. A. The psychology of human learning. New York: Longmans, Green, 1942.

McGinnies, E. Emotionality and perceptual defense. Psychol. Rev., 1949, 56, 244-251.

Noel Mailloux, O. P. y Lavelle, C. Genesis y significacion de la conducta "antisocial." Revista de psycologia general y aplicada. Vol. 16, 1961, 725-736.

Panton, J. H. MMPI profile configurations among crime classification groups. J. clin. Psychol., 1958, 14, 305-308.

Panton, J. H. The identification of habitual criminalism with the MMPI. J. clin. Psychol., 1962, 18(2), 133-136.

Pinillos, Jose Luis. La percepcion, como elemento psicologico de exploracion. Revista de Psicologia general y aplicada. 1962, 17, 833-841.

Postman, L., Bruner, J. S., & McGinnies, R. Personal values as selective factors in perception. J. abnorm. soc. Psychol., 1948, 43, 142-154.

Posthast, Miles D. A personality study and two types of murderers. Dissertation abstract, 1957, 17, 898-899. Abstract.

Pratt, C. C. Repetition, motivation and recall. British J. Psychol., 1936, 26, 425-429.

Proshansky, H. M. & Murphy, G. The effects of reward and punishment on perception. J. Psychol., 1942, 13, 295-305.

Reese, H. W. Discrimination learning set in rhesus monkeys. Psychological Bulletin, 1964, 61, 321-340.

Robinson, E. S. The psychology of public education. Am. J. Pub. Hlth., 1933, 23, 1-125.

Roitzsch, J. C., and Berg, I. A. Deviant responses as indicators of immaturity and neuroticism. J. Clin. Psychol., 1959, 15, 417-419.

Rosen, E., and Mink, S. J. Desirability of personality traits as perceived by prisoners. J. clin. Psychol., 1960, 17(2), 147-151.

Rosenthal, D., Lawlor, W. G., Zahn, T. P., and Shakow, D. The relationship of some aspects of mental set to degree of schizophrenic disorganization. J. of Personality, 1961, 28, 26-38.

Ross, S., and Kohl, D. M. Perceptual factors in number choices. J. gen. Psychol., 1958, 39, 39-47.

Rubin-Rabson, G. Correlates of the noncommittal test-item response. J. clin. Psychol., 1954, 10, 93-95.

Schafer, R., and Murphy, G. The role of autism in visual figure-ground relationship. Journal of Experimental Psychology, 1943, 32, 335-343.

Shelley, H. P. Response set and the California Attitude Scale. Educ. Psychol. Measmt., 1955, 16, 63-67.

Singer, W. B., and Young, P. T. Studies in affective reactions: III. The specificity of affective reactions. J. genet. Psychol., 1941, 24, 327-341.

Snedecor, George W. Statistical Methods. Iowa State University Press, 1964.

Spruill, Jean. Concurrent and empirical validity of the Perceptual Reaction Test. Unpublished M. A. Thesis, Louisiana State University, 1963.

Stagner, R. Psychology of personality. (2n. ed.) New York: McGraw-Hill, 1948.

Steele, Robert G. D., and Torrie, James H. Principles and Procedures of statistics. New York: McGraw-Hill, 1960.

Tolman, E. C. Theories of learning. In F. A. Moss (Ed.) Comparative psychology. New York: Prentice-Hall, 1934.

Vegas, Olga V., Frye, R. L., and Adams, H. E. Validation of the Iota scale of the Perceptual Reaction Test. Percept. and motor Skills., 1963, 17, 242.

Voth, A. C. An experimental study of mental patients through the autokinetic phenomenon. Amer. J. Psychiat., 1947, 103, 793-805.

Wallen, R. W. Food aversions and behavior disorders. J. consult. Psychol., 1948, 12, 310-312.

Weingold, H. P., Adams, H. E., and Wittman, F. Sexual symbolism, abstract designs, and the PRT. Psychol. Rep., 1963, 13, 90.

Winick, C. Personality characteristics of embalmers. Personnel and Guidance Journal, 1964, 43, (3), 262-266.

Witkin, H. A., Lewis, H. B., Hertzman, M., Machover, K., Meissner, P. B., and Wapner, S. Personality through perception. New York: Harper, 1954.

Witkin, H. A. The perception of the upright. Scient. Amer. 1959, 200, 50-56.

Wolfgang, Marvin E. Patterns in criminal homicide. Philadelphia, Penn.: Univ. Pennsylvania Press, 1958.

Woodworth, R. S. Situation-and goal-set. American Journal of Psychology, 1937, 50, 130-140.

APPENDIX

TABLE 1

Frequency of Responses to Each Option of the PRT for 300 5-6 Year Old Males

Item	NR	LM	LS	DS	DM	Item	NR	LM	LS	DS	DM
1	2	236	41	8	13	30	9	190	47	19	35
2	8	138	75	33	46	31	10	148	57	43	42
3	9	138	65	41	47	32	11	172	40	27	50
4	8	181	38	26	44	33	7	212	33	24	24
5	3	171	48	16	62	34	9	171	57	24	39
6	7	166	63	24	40	35	9	158	44	41	48
7	9	165	49	47	30	36	11	167	41	31	50
8	9	149	36	33	73	37	5	197	37	22	39
9	4	169	45	20	62	38	9	157	68	27	39
10	9	151	60	43	37	39	10	195	29	25	41
11	7	210	36	25	22	40	14	164	42	28	52
12	12	120	40	18	100	41	7	208	27	29	29
13	4	180	36	26	54	42	11	140	60	31	58
14	8	168	49	36	39	43	9	146	69	35	41
15	10	175	45	29	41	44	13	183	32	24	48
16	14	137	45	31	73	45	8	222	31	14	25
17	4	202	34	22	38	46	12	145	56	22	65
18	8	158	59	31	44	47	12	150	52	50	36
19	9	160	45	41	45	48	14	177	43	26	40
20	13	140	53	26	64	49	7	214	40	15	24
21	5	208	39	14	33	50	9	165	55	29	42
22	6	187	59	21	27	51	8	171	39	47	35
23	7	205	31	28	29	52	13	153	41	42	51
24	8	151	50	41	50	53	6	228	31	17	18
25	6	197	39	36	22	54	8	164	54	30	44
26	23	185	41	18	33	55	10	163	43	36	48
27	8	177	46	32	37	56	16	162	52	23	47
28	10	208	27	28	27	57	14	228	26	12	20
29	6	209	48	13	24	58	16	159	67	23	35
						59	15	182	46	33	24
						60	15	175	35	24	51

TABLE 2

Frequency of Responses to Each Option of the PRT for 300 5-6 Year Old Females

Item	NR	LM	LS	DS	DM	Item	NR	LM	LS	DS	DM
1	2	220	39	14	25	31	10	132	55	45	58
2	5	142	75	27	51	32	9	157	55	27	50
3	7	124	74	32	63	33	5	219	42	16	18
4	5	175	35	34	51	34	5	161	57	33	44
5	3	169	44	25	59	35	6	153	51	37	53
6	6	146	69	36	40	36	6	170	51	25	48
7	6	156	60	37	41	37	9	162	39	29	61
8	4	146	54	33	63	38	11	120	74	32	63
9	1	150	51	29	69	39	9	197	36	26	32
10	8	116	82	39	55	40	9	161	44	25	61
11	2	216	29	34	19	41	10	166	36	28	60
12	2	92	38	25	143	42	14	123	55	38	70
13	4	148	47	31	70	43	10	115	90	27	58
14	4	154	61	31	49	44	12	172	44	23	49
15	4	172	40	36	44	45	9	201	36	26	28
16	6	107	61	38	87	46	11	107	61	29	92
17	3	161	57	26	53	47	12	142	59	44	43
18	2	142	61	43	52	48	11	179	36	25	49
19	4	138	55	41	62	49	8	198	52	19	23
20	5	146	40	38	71	50	10	124	68	36	62
21	3	167	46	23	61	51	9	160	54	37	40
22	3	173	60	22	42	52	10	135	50	27	58
23	3	185	43	30	39	53	9	199	47	17	36
24	4	123	50	42	81	54	11	131	46	35	77
25	6	188	44	41	21	55	13	117	63	45	62
26	14	156	57	29	44	56	14	138	48	39	61
27	7	178	50	24	41	57	13	238	26	5	18
28	7	224	23	15	31	58	15	145	65	29	46
29	8	194	51	17	29	59	14	234	54	35	40
30	10	128	60	26	75	60	15	134	51	27	73

TABLE 3

Frequency of Responses to Each Option of the PRT for 100 7-8 Year Old Males

Item	NR	LM	LS	DS	DM	Item	NR	LM	LS	DS	DM
1	0	70	19	7	4	31	0	48	20	19	13
2	0	48	28	14	10	32	0	45	23	19	13
3	0	47	26	9	18	33	0	57	29	7	7
4	0	69	13	12	6	34	0	51	26	17	6
5	0	46	26	11	17	35	0	50	18	21	11
6	0	53	22	9	15	36	0	51	25	8	16
7	1	62	16	14	7	37	1	55	22	11	11
8	0	45	21	14	20	38	0	44	24	19	13
9	1	52	23	15	9	39	0	68	14	9	19
10	0	45	26	19	10	40	0	51	22	13	14
11	2	65	17	11	5	41	1	57	26	7	9
12	0	52	11	13	24	42	1	53	20	19	7
13	0	35	28	16	21	43	0	43	31	15	10
14	0	62	23	5	10	44	0	54	18	17	11
15	0	62	19	10	9	45	0	59	28	9	4
16	0	38	22	17	23	46	0	45	21	19	15
17	0	66	14	11	9	47	0	41	22	20	17
18	0	48	26	13	13	48	0	57	17	15	11
19	0	49	25	16	10	49	0	59	27	7	7
20	0	48	19	19	14	50	0	45	79	18	8
21	0	62	15	10	13	51	0	57	18	12	13
22	0	56	26	10	8	52	0	42	25	22	11
23	0	73	15	6	6	53	0	58	20	15	7
24	0	50	14	24	12	54	0	48	18	15	18
25	0	61	24	9	6	55	0	42	25	18	15
26	1	60	15	15	9	56	0	63	10	13	14
27	0	68	20	7	5	57	0	79	11	4	6
28	0	72	14	4	10	58	0	59	17	14	10
29	1	59	25	9	6	59	0	60	23	9	8
30	0	66	19	9	6	60	0	60	20	12	7

TABLE 4

Frequency of Responses to Each Option of the PRT for 100 7-8 Year Old Females

Item	NR	LM	LS	DS	DM	Item	NR	LM	LS	DS	DM
1	0	60	30	6	4	31	0	38	25	18	19
2	0	41	29	20	10	32	0	43	26	19	12
3	0	43	26	20	11	33	0	60	19	16	5
4	0	67	15	12	6	34	0	52	31	10	7
5	0	30	30	17	23	35	0	30	33	19	18
6	0	58	19	13	10	36	0	66	16	9	9
7	1	42	26	20	11	37	0	38	24	17	21
8	0	57	8	18	17	38	0	43	20	13	24
9	0	31	27	21	21	39	1	64	21	9	5
10	0	36	24	23	17	40	0	55	19	13	13
11	0	73	16	6	5	41	0	54	20	11	15
12	0	22	19	21	38	42	0	43	21	21	15
13	0	30	22	20	28	43	0	40	30	13	17
14	0	60	19	11	10	44	0	56	22	8	14
15	0	59	21	9	11	45	0	51	16	15	18
16	0	29	26	25	20	46	0	33	19	18	30
17	0	36	33	13	18	47	0	41	25	21	13
18	0	41	28	19	12	48	0	67	11	14	8
19	0	40	25	26	9	49	0	49	22	14	15
20	0	53	14	17	16	50	0	39	29	17	15
21	0	43	30	13	14	51	0	57	20	14	9
22	0	53	27	11	9	52	0	35	26	17	22
23	0	65	20	8	7	53	0	58	18	13	11
24	0	31	27	17	25	54	0	31	30	17	22
25	0	63	21	8	8	55	0	32	23	23	22
26	0	58	25	7	10	56	0	46	23	15	16
27	0	70	12	12	6	57	0	80	8	6	6
28	0	80	10	7	3	58	0	42	33	17	8
29	1	45	21	13	14	59	0	61	14	12	13
30	0	39	30	10	21	60	0	49	18	14	19

TABLE 5

Frequency of Responses to Each Option of the PRT for 100 9-10 Year Old Males

Item	NR	LM	LS	DS	DM	Item	NR	LM	LS	DS	DM
1	0	51	35	8	6	31	0	36	28	18	18
2	0	27	39	18	13	32	0	30	32	22	16
3	0	40	30	17	13	33	0	32	41	20	7
4	0	59	14	17	10	34	0	50	28	13	9
5	0	22	28	21	29	35	0	40	32	17	11
6	0	52	26	17	5	36	0	50	27	11	12
7	0	43	37	12	8	37	0	36	29	20	15
8	0	33	36	15	16	38	0	28	34	22	16
9	0	27	40	14	19	39	0	49	21	16	14
10	0	28	38	23	11	40	0	46	27	14	13
11	0	60	21	15	4	41	0	37	37	15	11
12	0	30	15	21	34	42	1	44	23	16	16
13	0	23	27	23	27	43	2	36	28	20	14
14	1	48	27	13	11	44	0	52	27	13	8
15	0	56	26	7	11	45	0	36	30	18	16
16	0	28	33	21	18	46	0	29	24	22	25
17	0	39	37	15	9	47	1	29	28	26	16
18	0	39	32	19	10	48	0	44	25	16	15
19	0	31	35	24	10	49	0	28	43	16	13
20	0	37	27	15	21	50	0	35	35	17	13
21	0	44	27	7	22	51	1	51	32	9	7
22	1	46	31	14	8	52	0	19	28	39	14
23	0	83	9	4	4	53	0	18	20	18	14
24	0	36	29	21	14	54	0	29	35	13	23
25	0	50	34	9	7	55	0	24	25	26	25
26	1	72	17	6	4	56	0	34	32	13	21
27	0	67	20	10	3	57	0	67	23	4	6
28	0	74	14	7	5	58	0	46	34	12	8
29	0	53	33	9	5	59	0	50	21	18	11
30	0	52	25	13	10	60	1	37	28	15	19

TABLE 6

Frequency of Responses to Each Option of the PRT for 100 9-10 Year Old Females

Item	NR	LM	LS	DS	DM	Item	NR	LM	LS	DS	DM
1	0	32	57	8	3	31	0	20	35	26	19
2	0	32	33	26	9	32	0	29	26	30	15
3	0	29	38	22	11	33	0	48	33	13	6
4	0	56	21	16	7	34	0	60	26	14	0
5	0	21	31	19	29	35	0	30	37	23	10
6	0	51	28	18	3	36	0	63	22	9	6
7	0	42	29	19	10	37	1	28	31	26	14
8	0	48	21	19	12	38	1	28	29	26	16
9	0	23	37	22	18	39	0	57	19	9	15
10	0	27	23	37	13	40	0	35	30	19	16
11	0	59	24	14	3	41	0	35	37	23	5
12	0	16	22	25	37	42	1	36	32	17	14
13	0	17	35	27	21	43	0	28	38	31	9
14	0	66	20	9	5	44	0	39	29	19	13
15	0	45	34	7	14	45	0	27	35	22	16
16	0	15	37	32	16	46	0	31	23	21	25
17	0	29	41	23	7	47	0	28	33	31	8
18	0	30	32	23	15	48	0	59	20	16	5
19	0	28	33	23	16	49	0	28	40	19	13
20	0	47	26	15	12	50	0	24	39	28	9
21	0	29	32	22	17	51	0	48	28	15	9
22	0	48	36	8	8	52	0	15	36	25	24
23	0	77	15	5	13	53	0	44	25	22	9
24	0	30	36	19	15	54	0	31	24	30	15
25	0	60	28	8	4	55	0	19	19	35	27
26	1	72	16	9	2	56	0	26	32	25	17
27	0	73	21	4	2	57	0	75	14	6	5
28	0	85	12	2	1	58	0	39	41	16	4
29	0	42	40	15	3	59	0	34	39	15	12
30	0	34	32	19	15	60	0	35	26	22	17

TABLE 7

Frequency of Responses to Each Option of the PRT for 100 11-12 Year Old Males

Item	NR	LM	LS	DS	DM	Item	NR	LM	LS	DS	DM
1	0	39	49	10	2	31	0	17	41	21	21
2	0	16	43	34	7	32	0	21	20	32	27
3	0	31	29	30	10	33	0	41	37	15	7
4	0	34	29	19	18	34	0	38	38	19	5
5	0	18	28	23	31	35	0	29	31	24	16
6	0	43	33	19	5	36	0	32	31	18	19
7	0	36	37	17	10	37	0	26	33	27	14
8	0	30	30	23	17	38	0	16	32	29	23
9	0	25	32	30	13	39	0	44	24	17	15
10	0	17	34	34	15	40	0	32	29	19	20
11	0	42	31	19	8	41	0	28	37	21	14
12	0	28	24	26	22	42	0	32	34	19	15
13	0	11	27	34	28	43	0	19	33	30	18
14	0	57	19	15	9	44	0	34	29	18	19
15	0	31	40	19	10	45	0	25	22	30	23
16	0	16	33	22	29	46	0	25	31	26	18
17	0	26	42	23	9	47	0	24	37	26	13
18	0	20	45	24	11	48	0	39	18	21	22
19	0	18	30	39	13	49	0	18	39	25	18
20	0	38	26	14	22	50	0	24	35	25	16
21	0	39	32	17	12	51	0	49	29	12	10
22	0	38	38	14	10	52	0	7	30	31	32
23	0	78	10	5	7	53	0	40	33	17	10
24	0	35	24	20	21	54	0	35	36	13	16
25	0	41	34	20	5	55	0	20	24	30	26
26	1	64	31	4	0	56	0	24	24	27	25
27	0	62	26	5	7	57	0	70	15	8	7
28	0	63	23	11	3	58	0	28	50	14	8
29	0	45	37	11	7	59	0	36	30	20	14
30	0	39	33	17	11	60	0	32	23	12	33

TABLE 8

Frequency of Responses to Each Option of the PRT for 100 11-12 Year Old Females

Item	NR	LM	LS	DS	DM	Item	NR	LM	LS	DS	DM
1	0	25	53	16	6	31	0	23	29	28	20
2	0	15	43	32	10	32	0	17	37	26	20
3	0	32	37	25	6	33	0	51	33	13	3
4	0	41	31	17	11	34	0	65	25	8	2
5	0	27	35	15	23	35	0	18	47	26	9
6	1	46	35	15	3	36	0	51	25	16	8
7	1	33	35	21	10	37	0	31	34	20	15
8	0	44	27	17	12	38	0	25	31	25	19
9	0	36	43	12	9	39	0	43	24	13	20
10	0	21	39	28	12	40	0	31	31	24	14
11	0	50	28	17	5	41	0	32	28	23	17
12	0	23	18	23	36	42	0	35	30	13	22
13	0	13	25	25	37	43	0	25	35	29	11
14	0	65	21	9	5	44	0	34	39	14	13
15	0	37	30	20	13	45	0	22	34	25	19
16	0	32	30	23	15	46	0	22	26	24	28
17	0	24	46	27	3	47	0	32	35	28	5
18	0	39	40	16	5	48	0	49	27	9	15
19	0	23	44	23	10	49	0	19	38	28	15
20	0	47	20	23	10	50	0	32	32	25	11
21	0	37	29	18	16	51	0	51	27	15	7
22	0	43	34	20	3	52	0	13	25	35	27
23	0	78	10	8	4	53	0	40	30	14	16
24	0	32	27	22	19	54	0	34	27	22	17
25	0	52	35	10	3	55	0	10	30	27	33
26	0	67	27	6	0	56	0	22	22	32	24
27	0	79	17	3	1	57	0	85	13	2	0
28	0	78	16	6	0	58	0	38	40	14	8
29	0	30	48	13	9	59	0	47	33	15	5
30	0	31	31	25	13	60	0	37	33	19	11

TABLE 9

Frequency of Responses to Each Option of the PRT for 500 Normal Adult Males

Item	NR	LM	NS	DS	DM	Item	NR	LM	NS	DS	DM
1	0	157	251	77	15	31	1	39	131	221	108
2	0	45	188	208	59	32	1	52	179	188	80
3	0	79	249	134	38	33	0	52	180	188	80
4	0	88	159	165	88	34	3	95	205	155	42
5	0	92	160	144	88	35	2	40	216	186	56
6	0	114	213	133	40	36	2	82	176	161	79
7	2	40	120	217	121	37	2	96	204	156	42
8	0	83	187	134	96	38	2	60	208	170	60
9	0	131	228	115	26	39	2	60	208	170	60
10	2	51	215	185	47	40	2	29	102	200	167
11	0	152	217	91	40	41	2	38	127	201	132
12	0	34	45	102	319	42	1	24	88	194	193
13	0	13	100	261	126	43	1	29	188	218	64
14	0	149	183	113	55	44	1	35	107	211	146
15	1	27	120	205	147	45	1	27	149	230	93
16	0	97	224	137	42	46	1	18	99	215	167
17	0	31	181	226	62	47	1	26	186	222	65
18	0	34	180	230	56	48	1	52	200	182	65
19	0	46	195	195	64	49	0	58	241	164	37
20	0	77	184	141	98	50	0	77	274	118	31
21	2	33	151	200	114	51	1	97	225	141	36
22	2	108	267	98	25	52	0	19	108	260	113
23	1	282	139	48	30	53	0	35	136	179	150
24	1	90	202	143	64	54	0	93	190	130	87
25	1	82	268	127	22	55	1	22	112	222	145
26	1	194	215	78	12	56	0	22	112	187	179
27	1	124	141	153	80	57	0	220	210	56	14
28	1	275	164	46	16	58	0	114	238	121	27
29	2	173	246	69	10	59	0	66	178	176	80
30	2	45	149	212	92	60	1	71	165	145	118

TABLE 10

Frequency of Responses to Each Option of the PRT for 350 Normal Adult Females

Item	NR	LM	LS	DS	DM	Item	NR	LM	LS	DS	DM
1	0	71	181	86	12	31	0	53	87	134	76
2	0	23	113	150	64	32	0	21	89	141	99
3	0	108	157	60	25	33	0	67	132	105	46
4	0	48	100	105	97	34	0	105	139	76	30
5	0	162	90	57	41	35	0	48	123	132	47
6	1	126	158	51	14	36	0	104	116	95	35
7	1	41	117	130	61	37	0	77	127	102	44
8	0	106	108	68	68	38	0	71	135	87	57
9	0	139	143	53	15	39	0	69	82	84	115
10	1	44	122	116	67	40	0	21	56	120	153
11	0	94	130	77	49	41	0	33	71	128	118
12	0	31	30	50	239	42	0	31	62	111	146
13	0	12	73	167	98	43	1	32	122	118	77
14	0	142	109	47	52	44	0	30	96	126	98
15	1	21	63	123	142	45	1	35	91	122	101
16	0	101	146	70	33	46	0	31	71	117	131
17	0	29	104	140	77	47	0	20	117	131	82
18	0	54	138	120	38	48	0	83	135	79	53
19	0	31	110	128	81	49	0	47	146	114	43
20	0	122	112	68	48	50	0	116	141	63	30
21	0	24	83	136	107	51	0	80	143	94	33
22	0	93	146	88	23	52	0	43	100	132	75
23	0	174	104	35	37	53	0	66	86	107	91
24	0	109	122	61	58	54	0	56	93	102	99
25	0	108	159	64	19	55	1	17	53	135	144
26	1	128	138	59	24	56	0	22	70	114	144
27	0	114	81	76	79	57	2	260	63	17	8
28	0	128	138	59	24	58	2	62	161	98	27
29	0	112	145	70	23	59	2	83	119	84	62
30	1	20	82	140	107	60	2	43	85	96	124

TABLE 11

Frequency of Responses to Each Option of the PRT for 60 Character Disorder Males

Item	NR	LM	LS	DS	DM	Item	NR	LM	LS	DS	DM
1	0	10	25	15	10	31	1	2	12	29	16
2	0	5	21	19	15	32	1	4	19	16	20
3	0	12	19	19	10	33	1	10	21	17	11
4	0	9	19	16	16	34	1	19	17	21	12
5	0	5	12	26	17	35	1	3	16	25	15
6	0	14	18	18	10	36	1	3	15	23	18
7	0	4	17	24	15	37	2	7	11	26	14
8	0	7	14	22	17	38	2	2	26	19	11
9	0	6	20	20	14	39	1	13	24	8	14
10	0	2	23	22	13	40	1	4	18	18	19
11	0	21	22	8	9	41	2	6	12	26	14
12	0	4	12	15	29	42	1	5	6	27	21
13	0	2	11	28	19	43	1	4	17	22	16
14	0	15	14	16	15	44	1	4	10	21	24
15	0	5	13	24	18	45	3	3	14	26	14
16	0	2	16	24	18	46	1	6	14	21	18
17	0	2	18	22	18	47	1	5	13	25	16
18	1	6	6	21	18	48	1	4	12	22	21
19	1	7	14	22	16	49	0	3	21	21	15
20	1	7	16	18	18	50	1	6	13	25	15
21	2	6	13	24	15	51	0	8	21	20	11
22	1	11	18	19	11	52	0	0	17	22	21
23	1	21	17	15	6	53	0	5	12	20	23
24	1	5	17	23	14	54	0	7	20	18	15
25	1	7	19	21	12	55	0	3	13	26	18
26	1	12	24	14	9	56	0	4	15	20	21
27	1	10	16	24	9	57	0	14	25	9	12
28	2	21	23	5	9	58	0	9	20	21	10
29	1	16	16	17	10	59	0	4	17	25	14
30	1	6	14	24	15	60	0	6	13	15	26

TABLE 12

Frequency of Responses to Each Option of the PRT for 44 Character Disorder Females

Item	NR	LM	LS	DS	DM	Item	NR	LM	LS	DS	DM
1	0	3	18	15	8	31	0	8	11	13	12
2	0	4	8	16	16	32	0	6	8	14	16
3	0	10	17	7	10	33	0	16	14	7	7
4	0	9	14	8	13	34	0	14	17	7	6
5	0	16	15	6	7	35	0	11	11	12	10
6	0	17	15	6	6	36	0	10	16	6	10
7	0	3	18	12	11	37	0	13	10	9	12
8	0	9	10	10	15	38	0	6	10	15	13
9	0	16	15	9	4	39	0	8	11	7	18
10	0	2	18	15	9	40	0	4	6	14	20
11	0	11	15	10	8	41	0	7	13	15	9
12	0	7	6	5	26	42	0	8	17	4	15
13	0	3	8	17	16	43	0	6	8	15	15
14	0	19	12	8	5	44	0	4	13	10	17
15	0	11	15	9	9	45	0	2	6	16	20
16	0	12	8	16	8	46	0	4	12	9	19
17	0	6	13	10	15	47	0	5	13	13	13
18	0	1	17	15	11	48	0	12	14	6	12
19	0	5	16	12	14	49	0	1	5	17	21
20	0	18	12	7	7	50	0	10	16	10	12
21	0	11	12	13	8	51	0	15	14	8	7
22	0	15	11	10	8	52	0	6	9	15	14
23	0	29	8	2	5	53	0	10	12	12	10
24	0	12	14	13	5	54	1	6	6	13	18
25	0	12	16	11	5	55	0	3	5	5	1
26	0	16	19	3	6	56	0	6	7	14	17
27	0	24	10	6	4	57	0	35	6	0	3
28	0	26	11	3	4	58	0	16	18	4	6
29	0	9	18	9	8	59	0	11	16	4	13
30	2	13	7	15	7	60	1	4	9	8	14

TABLE 13

Frequency of Responses to Each Option of the PRT for 30 Depressive Males

Item	NR	LM	LS	DS	DM	Item	NR	LM	LS	DS	DM
1	0	12	16	1	1	31	0	8	13	8	1
2	0	13	12	3	2	32	0	6	13	8	3
3	0	14	13	1	2	33	0	12	15	1	2
4	0	14	11	4	1	34	0	11	16	2	1
5	1	7	14	3	5	35	0	10	12	4	4
6	0	15	12	1	2	36	0	6	14	9	1
7	0	8	15	6	1	37	0	6	11	10	3
8	0	8	10	4	8	38	0	8	12	8	2
9	0	9	11	4	6	39	0	18	9	2	1
10	0	9	15	5	1	40	0	9	15	4	2
11	0	14	14	2	0	41	0	12	12	4	2
12	0	3	9	12	6	42	1	8	13	5	3
13	0	10	13	5	2	43	0	10	13	4	3
14	0	8	17	3	2	44	0	6	16	8	0
15	0	10	11	6	3	45	0	5	14	8	3
16	0	11	14	4	1	46	0	4	14	6	6
17	0	7	16	5	2	47	0	6	16	5	3
18	1	4	12	10	3	48	0	8	11	7	4
19	0	12	12	5	1	49	0	8	14	6	2
20	0	11	10	5	4	50	0	8	14	7	1
21	0	10	10	4	6	51	0	9	15	6	0
22	0	15	12	4	2	52	0	8	11	9	2
23	0	18	8	3	1	53	0	6	15	8	1
24	0	4	16	5	5	54	0	9	13	8	0
25	0	12	12	5	1	55	1	5	10	9	5
26	1	14	15	0	0	56	0	8	13	7	2
27	0	8	15	5	2	57	0	17	11	1	1
28	0	20	9	1	0	58	0	13	13	2	2
29	0	12	11	6	1	59	0	7	17	4	2
30	0	8	14	6	2	60	0	11	9	7	3

TABLE 14

Frequency of Responses to Each Option of the PRT for 39 Depressive Females

Item	NR	LM	LS	DS	DM	Item	NR	LM	LS	DS	DM
1	0	13	20	3	3	31	3	6	14	10	6
2	0	18	13	7	1	32	3	12	14	4	6
3	0	13	18	2	5	33	4	12	9	7	7
4	2	14	16	5	2	34	3	17	7	7	5
5	1	7	11	11	9	35	3	10	16	6	4
6	1	20	12	4	2	36	3	14	14	4	4
7	1	13	16	7	2	37	4	10	12	9	4
8	2	16	10	6	5	38	4	11	18	2	4
9	1	19	16	8	5	39	3	20	10	1	5
10	1	11	16	6	5	40	2	10	13	8	6
11	1	22	12	2	2	41	2	9	13	8	7
12	2	3	7	8	19	42	4	6	14	7	8
13	2	4	18	6	9	43	1	13	13	11	1
14	1	20	10	4	4	44	3	9	15	7	5
15	2	9	16	6	6	45	3	10	11	10	5
16	3	1	14	14	7	46	3	3	12	9	12
17	1	11	15	9	3	47	2	9	18	5	5
18	2	8	17	7	5	48	3	12	21	3	0
19	1	13	12	9	4	49	1	14	16	4	4
20	3	14	10	4	8	50	2	12	19	7	1
21	1	13	11	7	7	51	1	10	18	2	8
22	1	15	16	4	3	52	2	6	12	12	7
23	2	20	10	3	4	53	1	11	14	6	7
24	3	7	13	3	13	54	2	10	10	4	13
25	2	16	18	2	1	55	1	5	12	10	11
26	2	14	14	4	5	56	2	11	12	10	4
27	3	11	8	10	7	57	1	30	7	1	0
28	1	27	9	1	1	58	2	14	16	6	1
29	2	17	16	3	2	59	2	12	12	8	5
30	2	8	12	9	8	60	5	10	13	5	6

TABLE 15

Frequency of Responses to Each Option of the PRT for 60 Neurotic Males

Item	NR	LM	LS	DS	DM	Item	NR	LM	LS	DS	DM
1	0	12	39	5	4	31	0	10	19	20	11
2	0	9	29	13	9	32	0	12	26	17	5
3	1	12	24	14	9	33	0	8	29	16	7
4	0	10	32	11	7	34	0	11	26	17	6
5	0	9	21	19	11	35	0	9	29	16	6
6	0	24	27	5	4	36	0	10	22	20	8
7	0	11	25	17	7	37	0	6	28	21	5
8	0	6	25	18	11	38	0	6	23	23	8
9	1	13	24	16	6	39	0	20	25	10	5
10	1	13	24	18	4	40	0	12	20	18	10
11	0	21	24	9	6	41	0	7	23	18	12
12	0	8	9	17	26	42	2	7	15	25	11
13	0	8	22	22	8	43	0	7	30	14	9
14	0	18	16	19	7	44	0	7	29	15	9
15	0	7	21	16	16	45	0	8	22	18	12
16	1	10	26	18	5	46	0	4	12	26	18
17	1	4	23	19	13	47	0	4	26	19	11
18	0	6	23	19	12	48	0	6	25	15	14
19	0	7	27	13	13	49	0	6	30	18	6
20	0	9	19	19	13	50	1	6	26	21	7
21	0	8	21	17	14	51	0	8	21	23	8
22	0	21	26	9	4	52	0	4	25	23	8
23	0	21	24	8	7	53	0	11	20	19	10
24	0	8	23	19	10	54	0	5	27	17	11
25	0	14	28	12	6	55	0	2	25	20	13
26	1	17	29	9	4	56	0	6	22	19	13
27	0	15	22	14	9	57	0	22	26	9	3
28	0	24	24	7	5	58	0	11	29	16	4
29	0	8	36	10	6	59	0	6	28	22	4
30	1	5	17	25	12	60	0	11	21	16	12

TABLE 16

Frequency of Responses to Each Option of the PRT for 227 Psychotic Males

Item	NR	LM	LS	DS	DM	Item	NR	LM	LS	DS	DM
1	0	93	80	34	20	31	3	55	79	51	39
2	1	78	75	39	34	32	3	77	82	35	30
3	2	71	69	54	31	33	0	86	69	39	33
4	0	88	74	33	32	34	3	76	85	32	31
5	1	75	63	46	42	35	1	75	84	56	24
6	0	89	73	36	29	36	0	77	70	42	38
7	3	63	82	41	38	37	1	78	81	37	30
8	1	75	68	52	31	38	2	75	72	42	36
9	2	78	90	32	25	39	0	96	70	32	29
10	6	53	**103**	38	27	40	2	77	67	43	38
11	1	100	80	27	19	41	3	78	67	41	38
12	0	52	53	44	78	42	6	56	78	40	47
13	3	53	81	48	43	43	1	79	79	42	26
14	5	90	71	31	30	44	3	67	65	49	43
15	4	65	55	57	46	45	3	63	63	57	41
16	1	68	80	45	33	46	2	55	62	43	65
17	1	79	83	33	31	47	4	57	87	48	31
18	3	53	93	48	24	48	3	74	53	42	35
19	1	68	70	54	34	49	2	77	81	44	23
20	2	74	68	39	44	50	4	75	77	40	31
21	1	63	69	50	44	51	3	77	92	29	26
22	0	84	87	29	27	52	2	57	69	56	43
23	1	105	68	25	28	53	2	61	66	51	47
24	1	62	73	53	38	54	4	72	66	41	44
25	1	85	78	34	29	55	2	52	74	54	45
26	5	90	84	26	22	56	4	68	65	48	42
27	2	86	68	32	39	57	5	114	63	25	20
28	2	116	71	19	19	58	5	84	80	34	24
29	2	84	89	36	16	59	5	57	77	45	43
30	1	71	78	47	30	60	4	76	70	33	44

TABLE 17

Frequency of Responses to Each Option of the PRT for 79 Psychotic Females

Item	NR	LM	LS	DS	DM	Item	NR	LM	LS	DS	DM
1	0	33	23	13	10	31	4	24	18	13	20
2	2	21	29	10	17	32	2	29	24	11	13
3	3	27	27	11	11	33	4	25	25	10	15
4	1	29	21	13	15	34	3	33	26	6	11
5	2	35	19	9	14	35	3	31	27	7	11
6	2	36	28	4	9	36	3	34	19	7	16
7	3	27	25	11	13	37	3	25	26	8	17
8	3	29	18	14	15	38	3	30	25	6	15
9	1	32	26	10	10	39	3	42	14	11	9
10	1	29	23	14	12	40	4	27	23	12	13
11	1	46	18	5	9	41	5	26	23	6	19
12	2	13	20	12	32	42	6	14	22	16	21
13	1	24	24	12	18	43	3	25	25	10	16
14	3	40	22	4	10	44	3	18	26	12	20
15	0	19	26	15	19	45	2	25	18	17	17
16	3	22	23	17	14	46	5	20	18	14	22
17	3	23	26	15	12	47	4	24	23	13	15
18	4	24	27	12	12	48	3	29	23	11	13
19	3	30	23	14	9	49	3	27	25	8	16
20	1	26	28	13	11	50	4	13	25	11	16
21	3	24	22	8	22	51	3	24	27	10	15
22	3	36	24	9	7	52	4	22	18	15	20
23	3	42	14	5	15	53	3	23	24	9	20
24	4	27	22	13	13	54	4	27	18	9	21
25	2	36	18	12	11	55	2	24	24	11	18
26	6	32	22	7	12	56	3	22	25	14	15
27	3	29	19	13	15	57	4	53	12	5	5
28	3	49	15	5	7	58	4	29	25	11	10
29	2	35	24	9	9	59	4	24	17	8	16
30	3	21	27	10	18	60	2	32	20	5	20

TABLE 18

Frequency of Responses to Each Option of the PRT for 243 Retarded Males

Item	NR	LM	LS	DS	DM	Item	NR	LM	LS	DS	DM
1	38	112	57	17	19	31	82	72	35	22	32
2	41	81	70	26	25	32	80	74	38	25	26
3	43	99	58	15	28	33	80	100	27	15	19
4	47	98	43	22	33	34	81	66	42	29	25
5	57	82	39	21	44	35	78	81	32	28	24
6	58	97	48	20	20	36	81	68	38	23	33
7	57	86	48	21	29	37	80	81	36	18	23
8	60	81	42	23	32	38	83	60	40	34	26
9	74	84	30	22	33	39	83	98	31	15	16
10	75	73	40	24	31	40	84	66	41	20	32
11	73	97	33	13	27	41	81	93	27	22	20
12	80	58	38	18	49	42	93	45	44	25	36
13	79	79	28	23	34	43	89	65	33	25	31
14	79	58	44	27	35	44	87	60	34	29	33
15	81	75	32	25	30	45	81	85	33	19	25
16	80	58	37	26	42	46	80	54	35	34	40
17	77	92	32	19	23	47	82	66	37	25	33
18	81	68	41	22	31	48	82	63	36	28	34
19	77	75	32	31	28	49	81	82	38	15	27
20	79	61	28	24	51	50	85	62	38	27	31
21	74	99	34	17	19	51	86	74	36	24	23
22	75	77	40	27	24	52	89	48	42	28	36
23	79	93	29	18	23	53	83	88	35	17	20
24	80	68	37	25	33	54	83	56	45	23	36
25	80	100	27	16	20	55	83	60	29	26	45
26	89	76	32	23	23	56	84	60	38	27	34
27	84	84	32	21	22	57	83	94	23	19	24
28	82	87	29	19	26	58	86	61	41	32	23
29	30	93	36	11	23	59	89	63	37	25	29
30	77	74	45	23	24	60	87	67	34	20	35

TABLE 19

Frequency of Responses to Each Option of the PRT for 190 Retarded Females

Item	NR	LM	LS	DS	DM	Item	NR	LM	LS	DS	DM
1	21	105	37	7	22	31	30	69	35	22	34
2	21	78	52	18	21	32	29	85	30	15	31
3	26	84	34	18	28	33	27	102	33	11	17
4	23	101	34	6	26	34	28	86	34	18	23
5	25	82	28	20	35	35	28	91	30	12	29
6	25	93	36	17	19	36	26	82	34	23	25
7	26	85	33	16	30	37	32	80	29	14	34
8	23	73	37	23	34	38	30	66	37	19	38
9	26	88	34	12	30	39	28	100	23	12	27
10	29	77	34	19	31	40	28	72	34	13	43
11	24	101	30	17	18	41	28	94	25	12	31
12	26	62	35	16	51	42	35	58	35	18	44
13	28	84	35	14	29	43	32	75	27	18	38
14	25	66	43	21	35	44	34	77	20	19	40
15	25	60	33	16	40	45	27	83	29	14	37
16	25	65	34	26	40	46	29	62	28	31	40
17	29	94	19	22	26	47	28	75	33	20	34
18	26	75	42	20	27	48	29	85	25	17	34
19	27	80	36	14	33	49	32	86	27	12	33
20	26	67	33	16	48	50	30	77	33	21	29
21	28	89	34	13	26	51	29	79	31	16	35
22	29	87	39	13	22	52	30	70	25	18	47
23	28	100	26	17	19	53	32	77	33	11	37
24	28	70	39	20	33	54	30	69	37	19	35
25	30	96	29	18	17	55	30	67	30	16	47
26	43	79	30	19	19	56	28	79	30	18	35
27	34	89	23	18	26	57	31	108	21	6	24
28	30	106	22	14	18	58	27	82	34	21	26
29	29	97	28	14	22	59	27	80	32	14	37
30	28	84	30	21	27	60	31	82	29	14	34

TABLE 20

Frequency of Responses to Each Option of the PRT for 196 Schizophrenic Males

Item	NR	LM	LS	DS	DM	Item	NR	LM	LS	DS	DM
1	1	89	73	24	9	31	3	70	61	35	26
2	1	79	66	32	18	32	3	80	63	28	22
3	3	82	62	35	14	33	1	86	61	17	21
4	1	84	64	35	22	34	2	78	69	17	20
5	1	73	57	40	24	35	3	74	67	31	21
6	2	92	66	21	15	36	2	71	60	30	33
7	5	68	67	31	25	37	3	83	65	25	20
8	2	69	59	44	22	38	2	71	67	31	25
9	4	84	54	37	17	39	1	97	59	24	15
10	6	69	81	28	12	40	4	70	62	35	25
11	5	100	64	12	15	41	4	76	68	23	25
12	3	62	49	40	42	42	5	61	62	30	38
13	8	74	61	37	16	43	3	72	68	35	18
14	7	84	56	33	16	44	3	65	56	38	34
15	8	66	54	42	26	45	3	74	52	34	35
16	6	62	67	33	28	46	3	62	53	35	43
17	5	79	67	26	19	47	4	65	68	37	22
18	7	58	74	37	20	48	2	75	55	34	30
19	4	75	55	40	22	49	4	78	64	28	22
20	5	71	65	25	30	50	3	73	67	30	23
21	3	71	62	35	25	51	2	75	74	28	17
22	3	73	60	30	20	52	2	63	57	44	30
23	4	103	59	17	13	53	2	72	48	48	26
24	4	72	60	32	28	54	3	70	64	28	31
25	1	91	60	32	22	55	3	56	62	46	29
26	8	89	75	19	15	56	5	77	56	33	25
27	2	87	58	28	21	57	5	104	55	20	12
28	2	111	53	16	14	58	5	80	68	26	18
29	2	84	68	28	14	59	6	67	67	30	26
30	2	78	60	33	23	60	5	68	64	28	31

TABLE 21

Frequency of Responses to Each Option of the PRT for 166 Schizophrenic Females

Item	NR	LM	LS	DS	DM	Item	NR	LM	LS	DS	DM
1	2	72	59	18	15	31	3	63	52	24	24
2	3	54	62	30	17	32	2	64	55	21	24
3	4	63	59	25	15	33	4	67	53	18	24
4	2	73	50	24	17	34	3	80	54	15	14
5	2	72	49	22	21	35	4	60	65	17	20
6	5	85	52	9	15	36	3	75	48	19	21
7	4	63	60	23	16	37	4	53	62	25	22
8	4	63	52	25	22	38	5	64	62	13	22
9	2	68	54	27	15	39	5	24	54	12	21
10	2	60	57	30	17	40	6	63	47	26	24
11	2	91	41	17	13	41	4	62	61	14	25
12	2	35	47	33	49	42	8	45	60	27	26
13	2	52	55	29	28	43	5	59	56	22	24
14	3	81	53	13	16	44	5	53	63	22	23
15	1	56	53	31	25	45	4	65	52	23	22
16	4	58	38	28	18	46	5	44	67	31	29
17	3	53	65	29	16	47	6	53	76	14	17
18	3	60	60	25	18	48	5	71	53	19	18
19	2	73	57	19	15	49	4	59	65	22	16
20	3	43	58	20	22	50	5	60	62	19	20
21	3	56	46	30	31	51	5	61	58	21	21
22	3	78	62	12	11	52	7	50	60	23	26
23	3	88	41	17	17	53	5	60	51	28	22
24	4	59	58	23	22	54	5	22	58	20	31
25	2	79	54	16	15	55	5	46	54	36	25
26	8	33	48	12	15	56	6	57	53	25	25
27	5	66	55	18	22	57	6	107	36	7	10
28	3	119	28	4	12	58	7	74	53	18	14
29	3	81	55	15	12	59	7	60	58	20	21
30	2	53	64	26	21	60	8	70	44	15	29

TABLE 22

Perceptual Reaction Test
The Male KAR Scale*
(Character Disorder)

Item	NR	LM	LS	DS	DM	Item	NR	LM	LS	DS	DM
1		-				31					
2					+	32					+
3			-		+	33					
4						34					+
5				+	+	35			-		+
6					+	36		-			+
7						37			-		+
8						38		-			
9		-				39		+		-	+
10					+	40					
11						41					
12			+		-	42					
13						43					+
14			-		+	44					
15						45					
16						46					+
17		-	-	+	+	47			-		+
18					+	48			-		+
19					+	49				+	+
20			-		+	50			-	+	
21						51					+
22			-	+		52				-	+
23		-		+		53					
24			-		+	54					
25			-			55					
26		-				56					
27						57		-			
28		-				58			-		
29			-	+		59					
30						60					+

*Options marked plus are preferred by deviant group; options marked minus are preferred by normal adults.

TABLE 23

Perceptual Reaction Test
The Female KAR Scale*
(Character Disorder)

Item	NR	LM	LS	DS	DM
42				-	
49			-		

*Options marked plus are preferred by deviant group; options marked minus are preferred by normal adults.

TABLE 24

Perceptual Reaction Test
The Male DEP Scale*
(Depression)

Item	NR	LM	LS	DS	DM
12					-
33				-	
41				-	
42					-
43				-	
56					-

*Options marked plus are preferred by deviant group; options marked minus are preferred by normal adults.

TABLE 25

Perceptual Reaction Test
The Female DEP Scale*
(Depression)

Item	NR	LM	LS	DS	DM
11		+			
16		-			
40					-
56					-

*Options marked plus are preferred by deviant group; options marked minus are preferred by normal adults.

TABLE 26

Perceptual Reaction Test
The Male NER Scale*
(Neurosis)

Item	NR	LM	LS	DS	DM
6		+		-	
7			+		
43				-	
44		+			
52		+			

*Options marked plus are preferred by deviant group; options marked minus are preferred by normal adults.

TABLE 27

Perceptual Reaction Test
The Male PSY Scale*
(Psychosis)

Item	NR	LM	LS	DS	DM	Item	NR	LM	LS	DS	DM
1			-			31		+		-	
2		+		-		32		+		-	
3		+	-			33		+		-	
4		+		-		34		+		-	
5						35		+		-	
6		+				36		+		-	
7		+		-		37		+		-	
8		+				38		+		-	
9						39		+	-	-	
10		+		-		40		+		-	-
11		+				41		+		-	
12		+	+		-	42		+	+	-	-
13		+	+	-		43		+		-	
14				-		44		+		-	
15		+		-		45		+		-	
16		+				46		+		-	
17		+		-		47		+		-	
18		+		-		48		+		-	
19		+		-		49		+		-	
20		+				50		+	-		+
21		+		-		51		+		-	
22		+	-			52		+		-	
23						53		+		-	
24						54		+			
25		+	-		+	55		+		-	
26						56		+			-
27		+		-		57			-		
28						58		+	-	-	
29						59		+		-	
30		+		-		60		+			

*Options marked plus are preferred by deviant group; options marked minus are preferred by normal adults.

TABLE 28

Perceptual Reaction Test
The Female PSY Scale*
(Psychosis)

Item	NR	LM	LS	DS	DM	Item	NR	LM	LS	DS	DM
1		+	-		+	31		+		-	
2		+		-		32		+		-	-
3					+	33		+		-	
4		+		-		34		+		-	
5						35		+		-	
6				-	+	36		+		-	+
7		+		-		37				-	+
8						38		+		-	
9					+	39		+			-
10		+		-		40		+	+	-	-
11		+	-	-		41		+		-	
12		+	+		-	42		+	+	-	-
13		+		-		43		+		-	
14				-		44		+		-	
15		+	+	-	-	45		+		-	
16					+	46		+		-	
17		+		-		47		+		-	
18		+		-		48		+			
19		+		-	-	49		+		-	
20						50					+
21		+		-		51		+		-	+
22		+		-		52		+		-	
23			-		+	53					-
24						54		+			-
25		+	-		+	55		+	+	-	-
26	+				+	56		+	+	-	-
27						57					
28		+	-	-		58		+	-	-	
29		+		-		59		+	-	-	
30		+	+	-		60		+		-	

*Options marked plus are preferred by deviant group; options marked minus are preferred by normal adults.

TABLE 29

Perceptual Reaction Test
The Male RET Scale*
(Mental Retardation)

Item	NR	LM	LS	DS	DM	Item	NR	LM	LS	DS	DM
1	+	+	-		+	31	+	+		-	-
2	+	+	-	-		32	+	+		-	-
3	+	+	-	-		33	+	+	-	-	-
4	+	+	-	-		34	+		-	-	
5	+	+	-	-		35	+	+	-	-	
6	+	+	-	-		36	+	+	-	-	
7	+	+	-	-		37	+	+	-	-	
8	+	+		-	-	38	+	+	-	-	
9	+		-	-		39	+	+	-	-	-
10	+	+	-	-		40	+	+		-	-
11	+					41	+	+	-	-	-
12	+	+	+		-	42	+	+		-	-
13	+	+	+	-	-	43	+	+	-	-	
14	+		-			44	+	+	-	-	-
15	+	+		-	-	45	+	+	-	-	-
16	+	+	-	-		46	+	+		-	-
17	+	+	-	-		47	+	+	-	-	
18	+	+	-	-		48	+	+	-	-	
19	+	+	-	-		49	+	+	-	-	
20	+	+	-	-	-	50	+	+	-	-	+
21	+	+	+	-	-	51	+	+	-	-	
22	+		-		+	52	+	+		-	-
23	+	-	+			53	+	+	-	-	-
24	+	+	-	-		54	+		-	-	
25	+	+	-	-		55	+	+	-	-	-
26	+		-		+	56	+	+	-	-	-
27	+	+				57	+		-		+
28	+	-			+	58	+		-	-	
29	+		-			59	+	+	-	-	
30	+	+		-	-	60	+	+	-	-	-

*Options marked plus are preferred by deviant group; options marked minus are preferred by normal adults.

TABLE 30

Perceptual Reaction Test
The Female RET Scale*
(Mental Retardation)

Item	NR	LM	LS	DS	DM	Item	NR	LM	LS	DS	DM
1	+	+	-	-	+	31	+	+		-	
2	+	+		-	-	32	+	+	-	-	-
3	+	+	-	-	+	33	+	+	-	-	
4	+	+	-	-	-	34	+	+	-	-	
5	+		-		+	35	+	+	-	-	
6	+	+	-		+	36	+	+	-	-	
7	+	+	-	-		37	+	+	-	-	
8	+		-	-		38	+	+	-	-	
9	+		-	-	+	39	+	+	-	-	-
10	+	+	-	-		40	+	+		-	-
11	+	+	-	-		41	+	+		-	-
12	+	+	+		-	42	+	+		-	-
13	+	+		-	-	43	+	+	-	-	
14	+		-			44	+	+	-	-	
15	+	+		-	-	45	+	+	-	-	-
16	+	-			+	46	+	+		-	-
17	+	+	-	-	-	47	+	+	-	-	
18	+	+	-	-		48	+	+	-	-	
19	+	+	-	-		49	+	+	-	-	
20	+		-	-	+	50	+		-	-	+
21	+	+		-	-	51	+	+	-	-	+
22	+	+	-	-		52	+	+	-	-	
23	+		-			53	+	+		-	
24	+		-	-		54	+	+		-	-
25	+	+	-	-		55	+	+		-	-
26	+		-	-		56	+	+		-	-
27	+	+	-	-	-	57	+	-	-		+
28	+	+	-	-		58	+	+	-	-	+
29	+	+	-	-		59	+	+	-	-	
30	+	+	-	-	-	60	+	+	-	-	-

*Options marked plus are preferred by deviant group; options marked minus are preferred by normal adults.

TABLE 31

Perceptual Reaction Test
The Male SKI Scale*
(Schizophrenia)

Item	NR	LM	LS	DS	DM	Item	NR	LM	LS	DS	DM
1		+	-			31		+			
2		+		-		32		+		-	
3		+	-			33		+		-	
4		+		-		34		+		-	
5		+				35		+		-	
6		+		-		36		+		-	
7		+		-		38		+		-	
8		+				39		+		-	
9			-			40		+	+		-
10		+		-		41		+		-	-
11		+		-		42		+	+	-	-
12		+	+			43		+		-	
13		+	-	-		44		+		-	-
14						45		+		-	
15		+	-	-		46		+		-	
16		+				47		+		-	
17		+		-		48		+		-	
18		+		-		49		+	-	-	
19		+		-		50		+	-		
20		+		-		51		+		-	
21		+		-		52		+		-	
22		+	-			53		+			-
23						54		+			
24		+				55		+		-	-
25		+	-	-		56		+		-	
26						57			-		
27		+		-		58		+	-		
28						59		+		-	
29			-			60		+		-	
30		+		-							

*Options marked plus are preferred by deviant group; options marked minus are preferred by normal adults.

TABLE 32

Perceptual Reaction Test
The Female SKI Scale*
(Schizophrenia)

Item	NR	LM	LS	DS	DM	Item	NR	LM	LS	DS	DM
1		+	-	-		31		+		-	
2		+		-		32		+		-	-
3						33		+		-	
4		+				34		+		-	
5						35		+		-	
6		+		-		36				-	
7						37				-	
8						38		+		-	
9						39		+		-	-
10		+				40		+		-	-
11		+				41		+		-	-
12		+	+		-	42		+	+	-	-
13			+	-		43		+		-	
14						44		+		-	
15		+			-	45		+		-	
16						46		+	+		
17		+		-		47		+		-	
18		+		-		48					
19		+		-		49		+		-	
20						50					
21		+		-		51		+		-	
22		+		-		52		+		-	
23						53		+		-	
24						54		+		-	
25						55		+	+	-	-
26						56		+	+	-	-
27		+	-	-		57					
28		+	-	-		58		+	-	-	
29						59				-	
30		+	-	-		60		+		-	

*Options marked plus are preferred by deviant group; options marked minus are preferred by normal adults.

TABLE 33

Perceptual Reaction Test
The Male RET-SKI Scale*
(Mental Retardation Versus Schizophrenia)

Item	NR	LM	LS	DS	DM	Item	NR	LM	LS	DS	DM
1	+		-			31	+				
2	+					32			-	-	
3	+			-		33	+	-	-		
4	+		-	-		34	+		-		
5	+		-	-		35	+	-	-		
6	+		-			36	+		-		
7	+		-	-		37	+		-		
8	+		-	-		38	+	-	-		
9	+		-	-		39	+		-	-	
10	+		-		+	40	+		-	-	
11	+	-	-			41	+		-		
12	+		-	-		42	+	-	-		
13	+	+	-			43	+	-	-	-	
14	+	-	-			44	+		-	-	
15	+		-	-		45	+		-	-	-
16	+		-			46	+	-	-		
17	+		-			47	+		-	-	
18	+		-	-		48	+	-	-		
19	+		-	-		49	+		-	-	
20	+	-	-			50	+	-	-		
21	+		-	-		51	+		-		
22	+		-			52	+	-	-	-	
23	+	-	-			53	+		-	-	
24	+		-			54	+	-	-		
25	+		-	-		55	+		-	-	
26	+	-	-			56	+	-	-		
27	+	-				57	+	-	-		
28	+	-	-			58	+	-	-		
29	+		-	-		59	+		-		
30	+		-	-		60	+		-		

*Options marked plus are preferred by the mentally retarded group; options marked minus are preferred by the schizophrenic group.

TABLE 34

Perceptual Reaction Test
The Female RET-SKI Scale*
(Mental Retardation versus Schizophrenia)

Item	NR	LM	LS	DS	DM	Item	NR	LM	LS	DS	DM
1	+	+	-	-		31	+		-		
2	+			-		32	+		-		
3	+		-			33	+	+	-		
4	+		-	-		34	+		-		
5	+		-		-	35	+	+	-		
6	+		-			36	+		-		
7	+	+	-			37	+		-	-	
8	+		-			38	+		-		
9	+		-	-		39	+	+	-		
10	+		-	-		40	+		-	-	
11	+		-			41	+	+	-		
12	+	+	-	-	-	42	+		-		
13	+	+	-	-		43	+		-		
14	+	-			-	44	+		-		
15	+		-	-		45	+		-		
16	+				+	46	+		-		
17	+	+	-			47	+		-		
18	+		-			48	+		-		
19	+		-		+	49	+		-	-	
20	+		-		+	50	+		-		
21	+	+	-	-		51	+		-		
22	+		-			52	+		-		+
23	+		-			53	+		-	-	
24	+		-			54	+	+	-		
25	+		-			55	+		-	-	+
26	+	+	-			56	+		-		
27	+		-			57	+		-		
28	+	-				58	+		-		
29	+		-			59	+		-		
30	+	+	-			60	+		-		

*Options marked plus are preferred by the mentally retarded group; options marked minus are preferred by the schizophrenic group.

TABLE 35

Perceptual Reaction Test
The Male PSY-KAR Scale*
(Character Disorder)

Item	NR	LM	LS	DS	DM	Item	NR	LM	LS	DS	DM
1		-				31		-	-	+	
2		-				32		-			+
3						33		-			
4		-			+	34		-		+	
5		-		+	+	35		-		+	+
6						36		-		+	+
7		-		+		37		-	-	+	
8		-				38		-		+	
9		-		+	+	39		-			
10		-				40		-		+	+
11						41		-		+	
12		-				42		-	-	+	+
13		-	-	+	+	43		-		+	+
14		-		+		44		-			+
15		-		+		45		-		+	
16		-		+	+	46		-		+	
17		-		+	+	47		-		+	+
18		-		+		48		-		+	+
19		-			+	49		-		+	+
20		-		+		50		-		+	
21		-		+		51		-		+	
22		-		+		52		-			+
23				+		53		-			+
24		-				54		-		+	
25		-		+		55		-		+	
26		-				56		-			+
27		-		+		57		-			+
28		-				58		-		+	
29					-	59		-		+	
30		-		+		60		-		+	+

*Options marked plus are preferred by the psychotic group; options marked minus are preferred by the character disorder group.

TABLE 36

Perceptual Reaction Test
The MAN Scale*
(Male and Female)

Item	NR	LM	LS	DS	DM	Item	NR	LM	LS	DS	DM
1		+		-		31		-			
2					-	32		+	+		-
3		-		+		33		-		+	
4					-	34		-		+	
5		-		+	+	35		-	+		
6		-		+	+	36		-			+
7			-		+	37					
8		-		+		38		-		+	
9		-		+		39		-	+	+	-
10			+		-	40					-
11					-	41					-
12				+		42		-		+	
13						43				+	-
14		-		+		44					
15			+		-	45		-		+	-
16		-		+		46		-		+	
17					-	47					-
18		-		+		48		-		+	
19			+		-	49					-
20		-		+	+	50		-	+		
21			+		-	51					
22			+			52		-	-	+	
23					-	53		-			
24		-		+		54			+		-
25		-	+	+		55			+		-
26					-	56					
27		-		+	-	57		-	+	+	
28		+		-	-	58					
29			+	-	-	59		-		+	
30			+		-	60			+		-

*Options marked plus are preferred by normal adult males; options marked minus are preferred by normal adult females.

VITA

Velma Jean Spruill was born in St. Joseph, Louisiana, July 31, 1940. She attended elementary and secondary school in Innis, Louisiana. After graduating from high school she entered Louisiana State University and received the degree of Bachelor of Science in February, 1962. She received the degree of Master of Arts in August, 1963. She became a candidate for the degree of Doctor of Philosophy in August, 1966.

EXAMINATION AND THESIS REPORT

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Title of Thesis: Personality Variation Among Criminals and Psychiatric Patients Relative to Their Immaturity Level.

Approved:

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July 15, 1966